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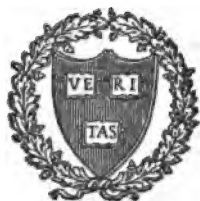
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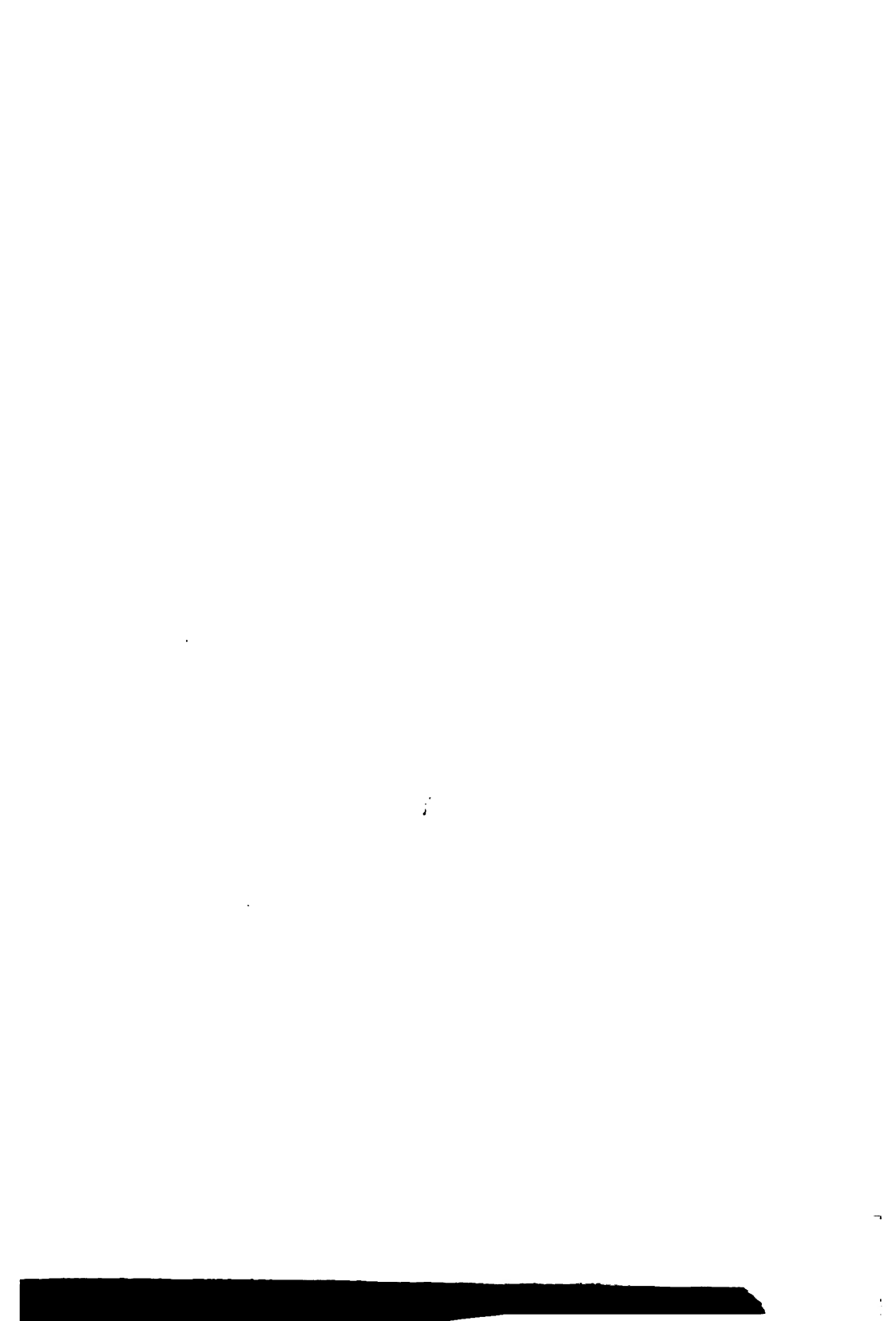
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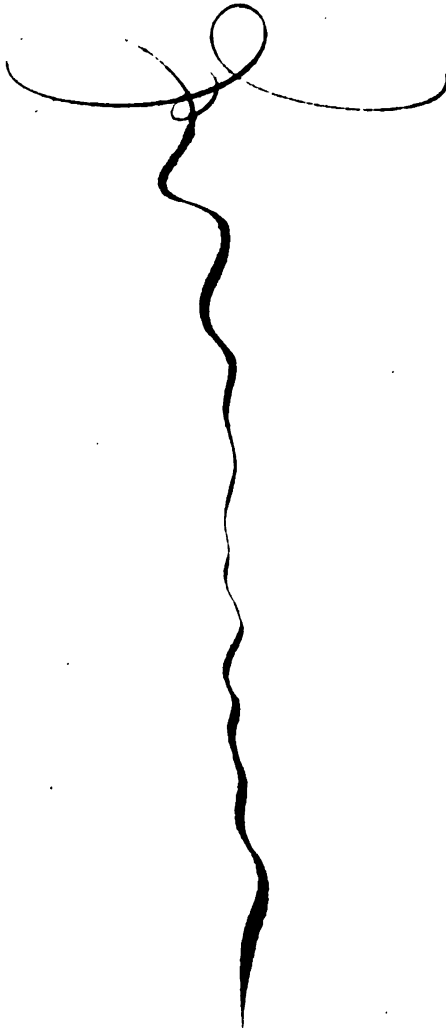
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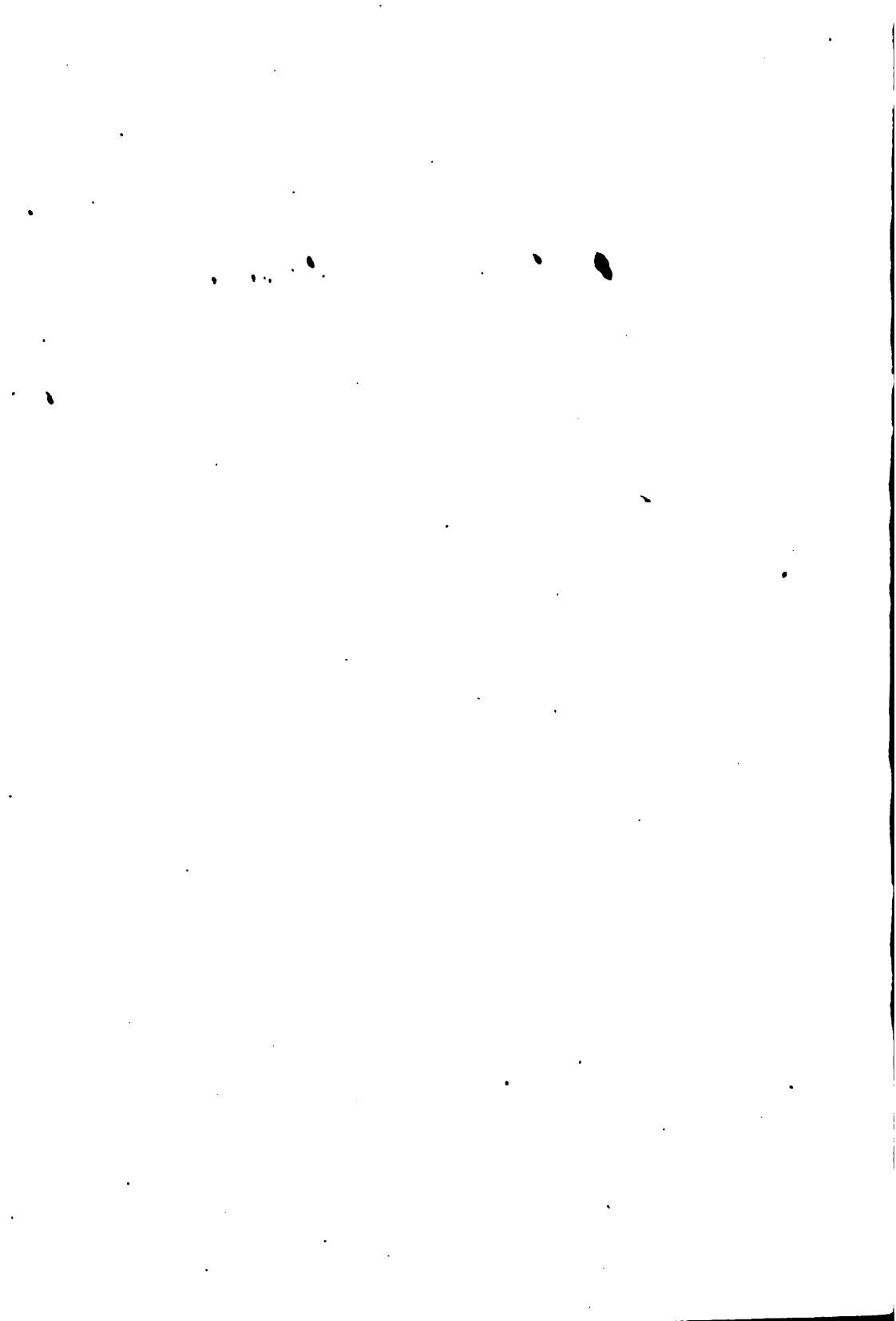
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THE

HORTICULTURIST,

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JOURNAL OF RURAL ART AND RURAL TASTE.

DEVOTED TO

HORTICULTURE, LANDSCAPE GARDENING, RURAL ARCHITECTURE, BOTANY, POMOLOGY,
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EDITED BY P. BARRY,
AUTHOR OF THE "FRUIT GARDEN."

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THE HORTICULTURIST.

A Journal of Rural Art and Rural Taste.

THE PRESENT AND FUTURE OF AMERICAN HORTICULTURE.

THE new position we find ourselves most unexpectedly placed in as conductor of this journal, has naturally induced more than ordinary reflection, not only on the existing state, but on the future prospects of American Horticulture; and it has occurred to us that it might be well to note here, as a starting point, the impressions which this reflection has suggested.

In taking a survey of the existing state of horticulture, the first thing that strikes us as noteworthy is, that *Pomology*—the study and culture of fruits—has advanced far beyond other branches of the art; and that in many respects it has already reached an importance here quite equalling if not surpassing what it has ever yet assumed in the oldest and most highly cultivated countries of the old world. This is what might have been naturally expected, for fruit culture is *par excellence* the useful of horticulture; and among a people so practical, so industrious, energetic, and money-making as ours, the *useful*, or that which offers an immediate and substantial remuneration, will always be in advance of the *ornamental*, or that which has more especially for its object the promotion of comfort and the gratification of taste. That very many have embarked in fruit culture to supply their own wants and gratify their own tastes, we do not of course deny; but what gives special prominence and importance to this branch of industry, and has latterly given such an extraordinary impetus to its development, is its *commercial* aspect—the planting of orchards for the production of fruit for markets. East and west, north and south, orchards are being planted on so extensive a scale as to seem entirely chimerical but for our vast extent of country, and an immense population, increasing in a ratio which no foresight can calculate. This has given a corresponding impetus to the culture of nursery trees, and converted this within a few years from an almost unnoticed pursuit into what is very justly regarded as a great interest, in which a large amount of capital is invested and labor employed. There is perhaps no way in which we can so accurately estimate the number of fruit trees planted annually in this country, as to glance over the nurseries. The advertising pages of this and other kindred journals display at times a most imposing list; but what are these to the thousand other establishments throughout the country that do not resort to advertising as a means of making sales. We think we might safely say that at one point alone, in the vicinity

of one town, there are as many fruit trees grown and sold as in all England, or we might say the "three kingdoms." Withal, the supply has not been, so far, equal to the demand, and orders to Europe for some years past have been so numerous and so extensive as to materially affect the business there. To our own knowledge the leading European nurseries have greatly extended their propagation on account of the American trade; and the inferior samples of many articles latterly sent out, show how closely their stock is annually disposed of.

It is unnecessary to examine more closely into these matters to become convinced that in the culture of fruit trees at least there is no lack of enterprise; and that as a branch of horticulture and profitable industry, it has become a great national interest, entitled to all the attention that can be given it by this and other journals devoted to the interests of horticulture. It is of great importance, not only to individuals, but to the country at large, that so much capital, labor, and skill as are absorbed by this pursuit, should be turned to the best possible account, and that every step be made in the right direction. The organization of an "American Pomological Society" was a timely and fortunate proceeding, and one which placed us, in this respect, in advance of other nations. No such society has yet been instituted in Europe, although greatly needed there as well as here, if only for the sake of reform in nomenclature. Those who import varieties from abroad well understand what confusion prevails there in regard to names. We look to this Society not only for a much needed reform in this respect, but for the collection of all useful information in regard to soils, climates, modes of culture, and in short everything pertaining to fruit and its culture. We consider the last session as establishing its character for utility, and substantiating its claims to public support. It has now the benefit of a constitution and laws, and is placed under the guidance of a wise, experienced, and zealous head, with worthy coadjutors. American fruit growers and nurserymen far and near look to it as the nucleus of an institution that shall be to them a beacon light, and a monument of their zeal and intelligence. In addition to this national society, various state and sectional societies of a similar character are already organized, and have held very interesting and instructive meetings. These will be so many auxiliaries, and can not fail to be of great service in concentrating the experience of their respective districts, in promoting a taste for fruit culture and in collecting and diffusing information on the subject. Association is one of the most powerful aids of science and art in all countries.

In descending from a general to a more particular view of the condition and progress of fruit culture, we find that one of its most remarkable phases is the attention given to the pear. Until within a few years, Boston held undivided sway in pear culture; her exhibitions alone displayed extensive collections. Very few cultivators beyond the limits of city suburbs had thought of planting a respectable collection of pear trees; throughout Western New York, which has latterly been styled the "Belgium of America," there were but a few scattering trees of the *Virgalieu*, the *Summer Bell*, (*Windsor*), and the old *Summer Bonchretien*. How is it now! The exhibitions of late years answer—collections of ten, twenty, thirty, fifty, and up to nearly two hundred varieties, grown in the highest perfection, and accurately named,

are to be found at our fall shows. The exhibitions in Ohio and Michigan the past season, show how rapidly this spirit is traveling westward. Great pear orchards, ranging from one hundred to one thousand, and even to several thousand trees, are in all directions starting into existence; and every man who has a garden and regards himself at home, is planting pear trees. The tables of the Massachusetts Horticultural Society, at their last exhibition, made a display of this fruit that has never been equalled in any country. Truly we shall in a short time have a great pear country. This pear-growing spirit has naturally awakened an inquiry into the various modes of propagation, pruning, and general treatment, that is rapidly leading to a more correct appreciation of principles, and a greatly improved system of culture.

The Culture of the Grape is another interesting feature in the present state of American horticulture. In the neighborhood of Cincinnati, and in various localities west and south, this branch of culture remains no longer an experiment, but is actually prosecuted on a comparatively extensive scale, and with a success greater than even the most sanguine had anticipated. The labor and capital it now represents, and its contribution to the general account of the productions of the soil, attracts attention at this moment both at home and abroad. There are considerations associated with the culture of the vine, beyond those of a mere pecuniary character, that incline us to regard the extension of its culture with peculiar interest.

The culture of the foreign varieties of the grape, under glass, is at the present time receiving considerable attention, and is becoming an important and interesting feature in American horticulture. Our bright, warm climate renders a simple glass roof alone necessary to bring them to the greatest perfection; fire heat being essential only to a few varieties, or to ripening them at an extraordinary period of the year. This culture is yet, in the main, confined to the neighborhood of the large cities, but it is gradually extending itself and will do so more and more rapidly as the construction and management of these "cold vineries" become better understood. To merchants and professional men, especially, who have gardens and enjoy some leisure hours, this is an interesting subject, and we invite their attention to it. One of the most complete and successfully managed small vineries we have seen, is in a neighboring town, the proprietor of which, an active business man, manages his vinery himself in his leisure moments, and produces crops that would not disgrace the most accomplished professional gardener.

The Kitchen Garden, or the culture of culinary vegetables, is a department of horticulture of much greater importance than it is usually considered. A very large class of our population have yet to learn the value to health and comfort of a regular and abundant supply of good and well grown vegetables at all seasons of the year. A great reform is needed in the dietetics of the country, and one of the first requisites in this reform will be the use of vegetables in a much greater proportion than at present. We are not to be understood as advocating "vegetarian" doctrines; but knowing by ample experience that our carnivorous system is exerting a baneful influence upon our health and strength, and fearfully promoting physical deterioration, we would urge its modification by greater attention to the Kitchen Garden. The

people need to be taught not only how to grow, but how to use vegetables to make them nutritious, healthful, and palatable. The markets of our large towns are in general well supplied. The market gardeners who pursue this as a profession, are generally well qualified for their duties, and perform them with a very creditable efficiency, as their gardens and market stalls bear witness. The tables of gentlemen who keep professional gardeners, are also no doubt well supplied; but away from large towns, and among the masses of the people, the supply of vegetables is most meagre indeed. The most delicious esculents, such as asparagus, sea-kale, and celery, are known only to a few; and how rare is the garden where a regular succession of radishes, salads, green peas, &c., is kept up during the entire growing season. We cannot now enter into illustrations or arguments, showing the economy of the use of vegetables, as well as the benefit to health and comfort, but hereafter, in the course of our labors, we intend to give the subject special attention, which we conceive it merits.

We now come to the *ornamental* department of horticulture. This ranks among the luxuries or embellishments of life, rather than the necessities, and is, therefore, compelled to wait, in its progress, for the acquisition of wealth and refinement of taste. These are not acquired in a day, nor a month, nor a year; and more especially taste, which is the more important element. Society, in a new country, has to pass through several phases before it reaches that in which the means of refining and cultivating taste are enjoyed to any great extent. Hence it is that ornamental gardening is confined, in a great measure, to the older States, and particularly to the neighborhood of cities and villages.

Landscape Gardening, which is the highest branch of the art, can only be practiced upon grounds of considerable extent, and as only a few individuals in this country have the means, or disposition, to devote much to merely ornamental purposes, we have but few examples of what can, properly speaking, be called landscape gardening. Besides, it requires in its execution, such a combination of skill and taste, as, it must be confessed, only a few of those who profess gardening, in this country, possess. There are two serious drawbacks upon the progress of landscape gardening, which we will sometime take occasion to discuss. Much, however, may be done with such means and materials as we do actually possess. No country in the world is blessed with such *natural* facilities for attaining, at a very cheap rate, a respectable position in this branch of horticulture. Wherever we turn our face, except on the naked prairie, we see fine natural landscapes, and the material of landscapes. Trees, and shrubs, and plants, scattered everywhere with unsparring bounty; lakes, rivers, quiet streams, rapid torrents, and thundering cascades; mountains and ravines, hills and valleys, blended so beautifully together, as to make our country one stupenduous landscape.

Among the agricultural population, and more especially in the older States, there is a very large class, not perhaps wealthy, but in what is termed "easy circumstances," abundantly able to improve their home landscapes in a manner becoming their pursuit, as well as their position in society; but they are deterred from making any attempt, from an apprehension of the *cost*. For this class of people, a simple and inexpensive system of landscape improvement must be pointed out, and we invite the

attention of practical gardeners, as well as gentlemen of taste, to this particular subject. This must be a system of landscape gardening for the million, and we regard it of the utmost importance.

Cottage or Villa Gardening, the title by which we designate the culture of small gardens and limited plots of ground, from a few rods to a few acres in extent, is much the more popular and more advanced branch of ornamental culture. In the neighborhood of all our cities and villages we find numerous examples, many of which exhibit a very creditable degree of skill and taste in their style and keeping. These cottage gardens are increasing, too, with amazing rapidity, and are working wonderful changes on the aspect of the country. The demand which this branch of gardening has created for ornamental trees and plants, is strongly evidenced in the increasing attention given by nurseries to this department. Extensive establishments are, in a great measure, turning their entire attention to it, large importations are annually made, and propagation is carried on with the greatest enterprise and activity; yet the demand for all the leading articles is greater than the supply, purchasers generally complaining that they cannot find what they want.

Everywhere men are manifesting a desire to withdraw their homes and families from the turmoil and impure air of cities, to the quiet suburbs or the open country. All are impatient, and aim at having a garden, if possible, all *ready made*, or instantaneously brought to perfection. This has led many into grave errors, and sadly marred the beauty of many cottage residences. But time and experience will put all right. This is a most interesting branch of horticulture, exercising a great influence upon the face of the country, and affecting the moral and physical condition of a very large and rapidly increasing class of the population. Much yet remains to be done, and we solicit from men of taste and experience hints and suggestions in relation to the improvement of cottage and villa gardening.

TREES FOR STREETS AND AVENUES.

WE are asked: "What are the twelve best deciduous trees for lawns and streets, in our cold climates?"

In the first place, we conceive it necessary to draw a distinction between *street* and *lawn* trees; because some of the most beautiful and desirable trees for lawns would cut a very sorry figure on a street. A street tree must possess certain leading qualities, such as *stateliness and symmetry of growth*; *large and abundant foliage*; *healthiness*—being exempt from all constitutional maladies; *cleanliness*—not being preyed upon by insects, either in wood or foliage. It should *transplant easily*, *grow rapidly*, and be patient under difficulties—disregarding all varieties of soil, flags and pavements over its roots, smoke and dust, bruises and various other accidents and misfortunes which street trees are heir to the world over. To all these qualifications add, if possible, beautiful and fragrant flowers, and foliage that has rich autumn tints.

But with all these they must not throw up *suckers* from the roots, nor emit offensive odors from the leaves or flowers. When you find a tree that will precisely answer this description, you cannot err in planting it on the street, opposite your house; or in town avenues intended as cool summer retreats and pleasant promenades.

But you will say that it is impossible to secure all these qualities. Very true; for trees, like men, have their failings and their vices too: but let us see what they are that come nearest the mark; or in other words, those which combine the greatest number and the most important of these qualifications.

The *American Weeping Elm*" (White Elm) is the first on your list, and on some accounts it is worthy of such pre-eminence. It is truly a noble tree—a magnificent tree—in the stateliness of its trunk, its gracefully curved branches and delicate drooping spray. What can equal it? Taken altogether, we must regard it as the finest of its genus in either hemisphere. For avenues it has no equal, where it has sufficient space for the free and full development of its natural form; but for narrow streets and side walks, where the houses are edging on them, does it not spread and droop too much for convenience? We think it does; and on that account would only recommend it for streets and avenues of extraordinary dimensions, with spacious sidewalks, and the houses well set back. For ordinary streets, we think the more compact headed species, such as the English elm and its varieties, better adapted. The English elm has smaller leaves than ours, but they remain green much longer in the autumn.

The *Scotch Elm*, or *Wych Elm*, (*Mortana*.) is, we think, the finest of all the European species—much more picturesque than the English, and more so even than our white elm, though neither so graceful or beautiful. We object to it as a tree for ordinary streets, because its trunk is generally not upright, but tortuous; and it soon divides into bold, wide spreading branches. It makes a noble park and avenue tree where it has abundant space.

The *Huntingdon Elm* bears a striking resemblance to our white, or weeping elm, and is possibly a seedling from it with slight variations.

The *Horse Chestnut* is one of the most extensively planted and well known of all foreign trees. For common street planting, it possesses probably as many qualifications as any in the whole catalogue—easily propagated and grown, and transplanted successfully at all ages, clean and healthy, with large foliage and superb flowers. Its head is compact and roundish, inclining to the pyramidal. When in full bloom, it presents a gorgeous sight. Those who have planted this tree will have no good reason to regret it.

The *Sugar Maple* is another capital street tree, but grows, unfortunately, at a comparatively slow pace. Aside from this, it has no superior. Its trunk is upright as a column; clear, and bright colored. Its head is compact without being dumpish, and the foliage is large and rich. It throws up no suckers, and is sweet and cleanly in all its habits and associations.

The *Red Maple* and *White*, or *Silver Maple*, are both good street trees; rapid in growth—extremely so,—regular and symmetrical in form, and cleanly. There is,

however, a sort of leanness, that strikes us even in the finest old specimens; owing to a thinness of foliage, that compares badly with the rich, luxuriant, tufty leafage of the sugar maple. The silver maple bids fair to become the most extensively planted, on account of its rapid growth. In new, treeless streets and villages, *rapid growth* is an argument too powerful to be resisted, especially in a community where there exists an active rivalry as to who shall produce the greatest results in the shortest period of time. Villages spring up and acquire importance in a year or two; and trees to correspond, must be none of those that grow by inches.

The *Norway Maple* is a fine tree, closely resembling our sugar maple in all important particulars, and grows much at the same rate; probably, as a general thing, not so fast.

The *European Linden* is an old favorite for streets and avenues, and it really possesses many of the most important requisites for such uses. It has a straight clean trunk, a compact head, abundant foliage, and flowers exquisitely sweet. In the day when old-fashioned, straight-lined, geometrical gardening flourished, the linden occupied a pre-eminent position in Europe; but in the modern style it is not much used. Some years ago it was much planted in our large cities, but it has latterly been thrown in the back ground by the ailantus. Wherever it is not affected seriously with diseases or insects, it deserves to be planted; but it is so attacked by borers in Western New York, as to be worthless. Out of several hundred trees planted ten or twelve years ago, very few now survive or flourish; borers attacked them, and they have been blown down. There are many varieties among the European lindens. We have seen some with reddish twigs, large leaves, and decided pyramidal heads, far superior in vigor and beauty to the common sort, and as far as we can judge from a few cases, less liable to the attacks of the borer.

The *American Linden*, (Basswood,) we regard, however, as equal to the best European varieties, and quite superior to the common one, for street trees. It is of more robust growth, has a cleaner, smoother trunk, and larger foliage, with flowers of almost equal sweetness. It is easily grown, and can be successfully transplanted at any age. It is in our opinion one of the most ornamental and appropriate street and avenue trees in the catalogue.

The *American White and Black Ash*, and the common *European Ash*, are all well adapted to street and avenue planting; but of these three species we must prefer our white. It is a noble, erect tree, and far superior to the others in beauty of foliage. There is a certain expression, lightness, ease, and grace, characteristic of the ash, that give it distinct claims upon our attention—more particularly when it is employed in the formation of the landscape. It grows rapidly, is cleanly, and may be transplanted successfully when of large size. Its roots are remarkably fibrous, and do not extend a great distance. The black ash has the disadvantage of being more liable to those black excrescences, that greatly disfigure it for ornamental purposes.

The *Beech* is a noble tree, and among all the others, none, we think, forms so impenetrable shade and shelter. What superb specimens there are to be found in our open fields, where the woodman's axe has not dared to strike them! Who can look upon

one of them in all their unshorn luxuriance, without admitting that the beech is truly "one of the most magnificent objects of God's fair creation"? Yet we can not recommend it for the street; it seems too much like caging the eagle. There is something about this tree, as well as the oak, that points out the open air, the free landscape, as their proper home. Besides, they are somewhat difficult to transplant when large, and they grow moderately. We can very well spare the beech from the streets.

The *Ailantus*! Dare we speak of it? It has had its day. Yet it possesses many of the requisites of a street tree—lofty and elegant, cleanly in all respects, and so rapid of growth, and so easily transplanted, as to suit the most impatient and the most careless planter. If some one could propose a practicable way of getting rid of the disagreeable odor of its flowers, and the suckers from its roots, the ailantus would still rank among the finest for streets. Why can not the flower buds be removed before opening, by means of a pair of pruning shears fixed to the end of a long pole? One reason why *suckers* have been in some cases so troublesome, is that many of the first planted trees were suckers themselves. Seedling trees of more recent propagation show less of this disposition. We know hundreds of trees planted ten or fifteen years, that have not as yet produced a single sucker. But let it go; with such a wealth of trees as we have, we can afford to be discriminating and critical.

The two trees which we regard as the finest of all our forest trees—the most *beautiful*—are the *Tulip Tree*, (Whitewood,) and the *Cucumber Tree*, (*Magnolia acuminata*.) The whole world does not produce two deciduous trees that surpass them in stateliness and symmetry of form, in ample foliage and superb flowers; but unfortunately both are most difficult to transplant, and especially so at that age and size necessary for a street tree; and neither of them, on this account, can ever be so employed to any considerable extent.

We have said more on this subject than we intended; and having said so much, it is almost needless for us to give a list of the twelve best deciduous trees for streets. We do not know that we could select twelve worthy of being recommended for such a purpose. For our own planting in the north, we should choose from the following: *Sugar Maple*, *Silver Maple*, *Horse Chestnut*, *American Linden*, *American White* or *Weeping Elm*, *English Elm*, and *White Ash*. Lawn trees we shall speak of hereafter.

THE SHELDON PEAR. *

THIS pear has for some years past attracted considerable attention in Western New York. It has been brought into the Rochester market, from the neighboring town of Penfield, and sold sometimes as *Brown Beurre*, and at other times as *Oswego Beurre*. Nearly all that have been brought in every year, have been purchased by one gentleman, at much above the usual price for the best varieties, because he esteemed it the best pear he ever saw or had on his table; and this gentleman is familiar with the *Seckel*, *White Doyenne*, and other pears of the highest quality. In 1849 it was exhi-

* See Frontispiece.

bited at Syracuse before the pomological society, and an interest was then awakened in regard to it that disclosed its history and origin. Mr. HOVER saw it at that time, and made some investigations in regard to it, and in June, 1851, gave a description and account of it in his Magazine. In that account he says that "no American pear, unless we except the *Swan's Orange*, or we might almost say any variety which has yet been raised, is destined to take a higher rank than the *Sheldon*." Its origin is similar to that of nearly all our native varieties, the work of mere accident. A few seeds are brought from the eastern States and sowed along a fence; three or four trees spring up, and in time produce fruit, among which the *Sheldon* has been discovered. But what is most remarkable about it, and almost incredible, is that three trees, all from seed, should produce exactly the same fruit, or fruit with scarcely perceptible variation. There is something about this that remains to be cleared up. Our neighbor, Mr. H. E. HOOKER, of the Rochester Commercial Nurseries, who is a close and accurate observer, recently visited the original trees while in bearing, and about the time of maturity of the fruit, and has kindly communicated the following observations:

"I do not feel satisfied now to express how highly I esteem the *Sheldon* pear, lest future observation and experience should not confirm the very favorable opinion which I have formed, from seeing it under favorable circumstances and for but a few seasons. If, however, it shall be found uniformly as fine as the specimens which have thus far come under my observation, it will, beyond question, rank with our best.

"For four or five years past, I have been aware that there was a pear cultivated in the town of Penfield, and very highly spoken of by good judges of fruit. Its name was unknown, and the locality from which it came not distinctly settled. It was known, however, that the scions had been procured from east of us—near Oswego, it was supposed. This led some persons to suppose it the *Oswego Beurre*, and it has been so called, and colored under that name, at Buffalo. It is, however, quite distinct from that variety, although it resembles it somewhat in its habit of growth, wood, and foliage; but it will not work on the quince stock, while the *Oswego* does quite well.

"After the appearance of Mr. HOVER's description and figure of the *Sheldon*, I was satisfied that the Penfield pear was the same variety, and the past autumn I visited the residence of Mr. SHELDON to see the original *Sheldon* trees. Much to my disappointment, I did not find Mr. S. at home, but was kindly furnished with some specimens by his wife, who corroborated the published statement as to the planting of a row of pear trees, raised from seed brought from the eastern part of the State, along the line of a fence which has since been removed.

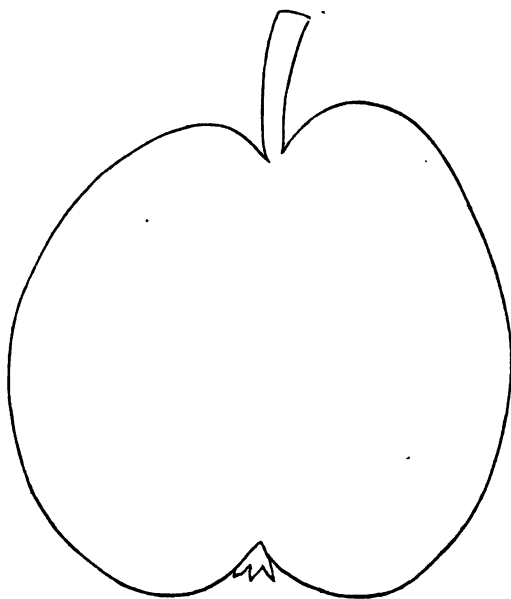
"I found three trees which gave no indications of having been worked. All are so clean and smooth that only one very small shoot could be found springing from below or about the collar. This had the characteristic leaf and wood of all the old trees, which do not seem to differ in their habit of growth—vigorous and tolerably upright. The fruit from these trees was so nearly alike that it might all pass as the product of one; but as a whole, the fruit of one was larger and more highly colored, having frequently a red cheek or blush; still, even this difference was not greater than is sometimes seen on different trees of the same variety. I marked specimens from the different trees, 1, 2, 8, and took pains to secure some small ones to ascertain *their* value, and have ripened most of them, and dis-

tributed others. They have, so far as I know, all proved *fine*, even the imperfect ones, which last I esteem a very desirable trait—if it is a trait—so many of our pears fail in this respect. As I expected, the fruit from No. 1 was best; but the others were so nearly equal, and so similar in flavor, that I feel quite disposed to doubt their seedling origin and hold to the belief that nature has not gone so far out of her usual course as to produce several such excellent fruits from so small a number of seeds, and these all alike; besides, there is said to be more in the vicinity, from the same lot, just as good and just like them, ripening at the same period, and all large, bearing trees, producing from six to twelve bushels of fruit each. This is hard to believe, even with good evidence.

"My observation of these bearing trees led me to form a very favorable opinion of its vigor, hardiness, and productiveness; and as I am partial to its high flavor, and exceeding juiciness, you may suppose that I hope to see it fairly proved and generally known."

Our opinion, as to the quality of this variety, coincides with that of Mr. HOOKER. If it prove as fine always, and in other places, as we have so far seen it here, it will rank as "best." It has been pretty widely disseminated for trial and we hope soon to hear a good account of it.

Fruit—medium, or rather above medium size; the outline, and engraving, are from average specimens. Form—generally roundish, but varying much; some-



THE SHELDON PEAR.

times quite round, others obovate or inclining to oval; some taper to a point at the stalk, and others are as broad at the stalk as at the eye. Stalk—short, sometimes set on the surface, but generally sunk slightly, as in the outline. Calyx—medium size, in a smooth, round, rather shallow basin. Skin—smooth, usually of a greenish russet; some specimens are tinted with light red on the sunny side, some slightly bronzed, and others without any color. Mr. HOOKER found all on one tree colored, and the specimen from which our colored drawing was taken, had, as represented, a rich dash of red on the sunny side. Flesh—remarkably melting and juicy, sugary and rich, with a sprightly and peculiar

flavor that is totally distinct from all other pears we have tasted. It is rather gritty at the core, and ripens and keeps remarkably well in the house. Tree—erect in its habit, with light yellowish shoots and prominent buds, much like the wood of the *Osvego Beurre*. It is hardy and a good bearer, but so far has not succeeded well on the quince.

WHEN TO PRUNE.

A correspondent has furnished us with the following text: "At what times in the year should the different kinds of pruning be performed, in the cold latitudes of the north and in the milder climates of the south?"

We hold that pruning in general, in our northern climates, is safest after the severe frosts of winter are over, immediately before the swelling of the buds. When performed early in the winter, or in the autumn, as is practised properly in mild climates, the ends of the cut shoots dry up, shrivel and die: losing the buds intended to make leading shoots; and leaving dead points that require much labor to prune off afterwards; or if large branches are cut off, leaving a broad, fresh surface, the wood and bark dry up and require a long time to heal. We perform most of our pruning in the month of March, although a great deal of the less exact nursery pruning is done in February. Southward, as the winter is mild and spring early, we should prefer pruning very early in the winter or immediately after the fall of the leaf, because *activity* in the functions of the tree commences early, or scarcely ceases, as we must believe it does during our intensely cold weather, and by pruning early we economize the sap and strength of the tree.

"*Pruning in the season when the leaves are on.*" The only pruning we hold to be sound, safe, and commendable, at this season, is that of the *finger and thumb*, in other words *pinching*. It is quite inconsistent with good management to rear a crop of shoots and then cut them away. This can only be avoided by nipping superfluous and misplaced shoots at two or three inches of growth, before they attain to woodiness. This economises the force of the tree and turns it into a channel where it will promote, instead of frustrating, the ends we are aiming at. For instance, if we plant a young tree, and have pruned it with a view to a certain form, and contrary to our expectations a shoot breaks out at an unexpected point, and assumes a vigorous habit and robs all the other parts, it would evidently be unwise to tolerate this intruder until it arrives at full growth and then cut it away. Too many trees are thus managed, by the neglect of summer pruning or pinching. We admit, however, that there are cases in which the summer pruning, or entire lopping off or cutting out branches of considerable size, may be judicious and safe. For instance, in the case of neglected orchard trees, in a luxuriant state, with dense heads in which the fruit is deprived of air and light. In such cases, branches may be thinned out, and the cut surface heals over more rapidly and smoothly than at any other time. But it is unsafe to produce any very sensible diminution of foliage, as it arrests the growth of the tree.

All pruning in the growing season, tends to arrest growth. Nurserymen know that a slight pruning of stocks before budding, will so arrest growth as to make the bark adhere firmly; when, before the pruning, it lifted freely. It is on this principle that most all pruning, to promote fruitfulness, must be done, at a point of a greater or less activity of growth. Late spring pruning is often resorted to as a means of subduing a superabundant vigor, and it has the same effect as root pruning to a certain extent.

THE HOME OF THE LATE A. J. DOWNING.*

WHEN such a man as DOWNING dies—a man whose life has been eminently useful and beautiful—the world desires to know more of him. Many who in his life-time neither knew Mr. DOWNING nor felt any interest in the pursuits to which he was devoted, now that he is dead, and especially that his death was so shocking and so sudden, manifest a great anxiety to learn more of his history and of his tastes and pursuits. Many who for years have been in intimate communion with him through his writings, have never, save in imagination, seen his home—the spot which of all others on earth was dear to him. We think, therefore, that at this time the following sketches will be very acceptable; not merely gratifying to that deep and melancholy interest awakened by Mr. DOWNING's sad fate, but instructive to all who are studying the improvement of grounds.

Mr. DOWNING's cottage was the first of his designs; and probably it was this that drew him and attached him to the study of architecture, and gave us those writings that have done so much to augment the beauty and comfort of country houses, and which he has left us as an invaluable legacy. This fact alone gives increased interest to the house, and will silence the voice of the critic in regard to any errors or imperfections that may be discovered.

The grounds are limited—only four acres in all, we believe, including the vineyard. By the exercise of Mr. DOWNING's taste and judgment in the arrangement of walks and grouping of trees, it appears much larger. There are many fine specimens of rare trees on the grounds, which will be referred to in the plan. The defect that strikes the eye now in passing over the grounds, is that the trees in many cases are too close; but this is a defect which is very natural, and can scarcely be avoided in limited

* See Frontispiece. EXPLANATION.—The following list contains the Key to the letters on the Plan: L, Library, H, Hall. P, Parlor. D, Dining-room. O, Office. S, Study. F, Fir tree. W, Warwick vase. R, Hermitage. A, Arbor. K, Rock-work. V, Borgheze vase. G, Green-house. Y, Yard to ditto. M, Gardener's house. B, Barn.

Key to the arrangement of the most remarkable specimens of trees on the grounds.

1. *Magnolia conspicua*—a magnificent tree; said to be quite visible from the opposite side of the river, a mile distant, when in bloom.

2. *Magnolia acuminata*, or cucumber tree.

3. Deciduous Cypress.

4. *Magnolia tripetala*, (umbrella)

5. European Linden.

6. *Virgilia lutea*. A large and fine specimen of a very rare tree.

7. *Salisburia adianthifolia*, (Maiden Hair tree.) A fine specimen.

8. A beautiful, low, broad tree, of the Fern-leaved Beech.

9. English cork-barked Elm.

10. European Larch.

11. Balsam Fir. A lofty, elegant specimen.

12. American White Spruce. The most beautiful cul-

tivated specimen we have seen—about thirty feet in diameter (of the branches) at the ground.

13. Common Weeping Ash.

14. White Horse-Chestnut.

15. Yellow do.

16. Cut-leaved Birch.

17. A fine broad specimen of a neglected native shrub, *Dirca palustris*, (leather wood.)

18. *Acer campestre*, (common English Maple.) Quite a scarce tree, of low stature, with rough corky bark. A handsome specimen.

19. The large bronze vase.

20 and 21. Weeping Willows.

22. *Pinus excelsa*.

23. *Abies Smithiana*.

24. *Abies cephalonica*.

X. The Sundial.

In addition to these there are many interesting shrubs, plants, &c., on the lawn, that we have not thought it necessary to take note of in such a general sketch as this is intended to be.

grounds. The desire to possess as many new and rare trees as possible, induces one to plant year after year, even after the grounds are already filled.

To an intimate friend of Mr. DOWNING we are indebted for the following article, whose pen, so beautifully said, has been "guided by love."

A VISIT TO THE HOUSE AND GARDEN OF THE LATE A. J. DOWNING.

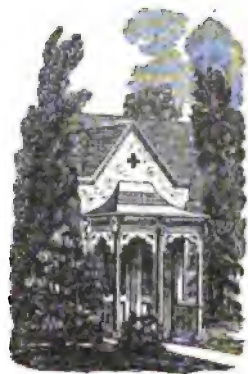


VIEW IN THE GROUNDS.

To describe a dwelling and a garden like Mr. DOWNING's, is like analyzing a poem whose beauty has long ministered to our daily happiness, and whose melody has for many years sung unquestioned to our hearts. Hence, in many ways, the task is not one that we should seek, nor can we hope that we shall perform it to the satisfaction of all those who knew and loved the place; but where love guides the pen, we can not wholly fail, and the artist's pencil will aid us where words are weak and insufficient.

The library is a cheerful and delightful room opening from the hall, and having doors leading on one side to the parlor, and on the other to the dining room. On the west side is a large bay window, and in front of it stands the spacious table at which Mr. DOWNING wrote. In the winter the family forsook the fine south room, which on account of its size was not easily warmed, and lived in the library, which, with its cheerful fire and books and busts, became the gathering point of the household, and the chosen seat of the winter's evening mirth and daily study.

For some time Mr. DOWNING's office was the upper south chamber in his house, but increasing business and the frequency of calls made it necessary to construct a room which could be entered from without. For this purpose the office was built—an addition to the house entered from the garden by a porch, and from the library by one of the book-cases, which, set into the wall, was made into a door, and when shut could not be distinguished from the others in the room. The office is divided by a partition into two rooms; one was Mr. DOWNING's private study, the other the place where the architectural business was carried on. No place could be more delightful than this room to work in. On one side the southern windows let in the warm and cheerful sunlight, on another the rows of books give a grace and charm to the apartment, and opposite them the bright wood fire warms body and soul with its crackling flames. The room is no merely whitewashed parallelogram, but,



OFFICE PORCH.

though inexpensive in its construction, is agreeable in color and proportion. The walls are divided into panels, and the wood-work is stained; some fine architectural prints adorn the western end; and the whole air of the place is that of taste and refinement.

Let us first, in order to see clearly what Mr. DOWNING has done for this place, find out what was its condition when he first became its master. The ground is in shape nearly a parallelogram, and together with two other lots east and southeast of the present garden, constituted the original property as it was left at the death of his father. All the land that Mr. DOWNING owned at the time he died, was the lot represented in the plan, containing a little over four acres, all which was under cultivation. The whole place is surrounded by a hedge; on three sides this is of English thorn, and on the south it is of *arbor vitæ*.* The house in which Mr. DOWNING was born, now thirty-seven years ago, stood where the green-house is at present; and the wistaria vine which is trained on a trellis over the path, formerly climbed up the front of the little dwelling. East of the cottage, and, I think, connected with it, stood the old green-house, having in one end an office where the business of the place was conducted; and that portion of the ground immediately about the house was cultivated as an ornamental garden. The tall balsam fir near the gate is one of the few trees planted at the time we speak of, and still remaining in its original place. This tree is a specimen of remarkable beauty; rising full seventy feet without a curve and without a single dead branch, it was always a pleasant memorial with Mr. DOWNING of his early days. That portion of the original garden which was not laid out in ornamental beds was planted as a nursery, and constituted three-fourths of the whole lot. It continued in this way till within fifteen years, when Mr. DOWNING and his elder brother CHARLES, who since their father's death had carried on the business together, separated, and the place came into the hands of its late owner. He now commenced his alterations; and shortly after his marriage, which took place about this time, began to build his house. He lived for the first year after his marriage at his father-in-law's, Mr. J. P. DE WINDT, in Fishkill Landing, and crossed the river

every day to superintend the erection of his new dwelling. He continued a nurseryman till about six years ago, when he abandoned the business altogether, altered his grounds to nearly their present shape, and commenced the practice of landscape gardening and rural architecture.

The arrangement of the grounds is simple. Entering at the gate, the visitor follows the carriage-road, and when opposite the green-house, takes the path which turns eastward and skirts the vine-



VIEW FROM THE LAWN.

* The hedge of *arbor vitæ* which conceals the green-house yard, was the first of the sort planted in this part of the country. It forms a handsome, lofty, and impervious screen.

yard. This path in fact divides the lawn; as it approaches the house it runs down toward the vineyard, leaving the greatest extent of lawn before the building, and having accomplished this, turns again toward the west. A thick shrubbery runs along the edge of the vineyard, between it and the path, arranged in such a way as to give views of the river and the opposite shore without allowing the vine poles to appear. The vineyard, seen in the plan, is a new one just in bearing, having been planted three years this summer. It contains nearly a thousand vines, *Isabellas* and *Catawbas*. Mr. DOWNING had a few other varieties scattered through the grounds; there is a fine specimen of the *Elsinborough* near the office; but he had none of the more delicate varieties which require artificial heat. Mr. DOWNING spoke at times of removing his vineyard to another spot, and turning the whole into lawn and ornamental ground. To have done so would have added greatly to the beauty of the place, and there is no doubt that with his love for lawns he would hardly have been contented long with the small though beautiful one which he possessed. By careful planting originally, and by regular mowings every fortnight, this garden is able to boast a lawn whose velvet it will not be easy to rival on our river; and whose exquisitely tinted surface, shaded with clumps of trees and enriched with flower and vase, was a real triumph in our adverse climate and beneath our scorching suns.

In passing along the path which we have entered, you catch a glimpse through the trees of the little Sundial with its motto, "*Horas non numero nisi serenas*"—"I number none but sunny hours," and few others ever passed over this happy place. When I first saw this dial the ice was on the ground, and a little hillock of snow upon the top of the pillar prevented the sun from recording the hours. I brushed away the snow to find the time. Mr. DOWNING was with me, and, I remember, told me about some ancient dial he had seen when abroad. This morning the first snow of the year is on the dial and on his grave. Still further on, we come to that portion of the walk from which we obtain the view of his house given in the frontispiece of this number. In the foreground is the graceful and effective cast of the Warwick Vase, which forms the subject of the vignette at the end of the present article, and which will give to many of our readers who have heard of this celebrated production of antiquity an idea of its exquisite decoration and fine proportion. Looking at the house where we stand, and marking its bold yet unassuming architecture, and then referring to its plan as given in the drawing of the grounds, we venture to ask whether such a building, erected as it was at the age of twenty-four, before Mr. DOWNING had ever seen a private dwelling having the slightest pretension to elegance, and when all his ideas of such matters were procured from one or two English books, does not exhibit a native taste and refinement in the man. Many of our professed architects who have had the advantage of years of study and travel, together with the use of the best books, build houses which do not exhibit half the tasteful design nor the convenient and elegant arrangement of this young man's work.

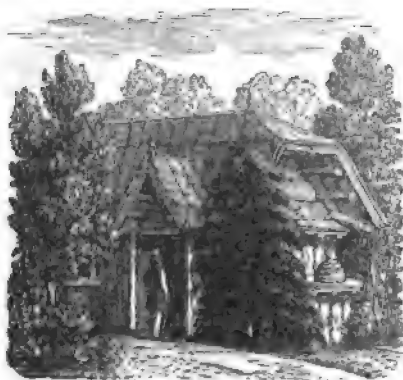


SUNDIAL.

Continuing our walk, we find that the shrubbery on our right, forms the boundary of the garden; and that the path which we have entered, and which has this shrubbery for wall on one side, is the outline of the garden, and commands all that is worthiest seeing in that small but beautiful domain. You notice, as we pass, that there is no separate flower garden. Mr. DOWNING never thought well of drawing a line between the lawn and shrubbery, and the parterre. His manner was to set his flower beds in grass, or to lay them along the edges of paths. Thus the walk which runs east and west between the Hermitage and the Arbor, is lined on one side by a border containing carnations and a few fine roses; but for the most part you will find circular beds of flowers set like gems here and there in the lawn, or grouped in irregular masses before the shrubbery, which served for back-ground. Two of these circular beds were particularly noticeable, and formed brilliant objects in the portion of the ground where they were placed. A bed of scarlet geraniums near the Warwick Vase was a magnificent object all the summer; and another of the portulacca presented a disc of purplish crimson which seemed to palpitate at radiant morn and glowing noon with what appeared at times like actual emissions of light. There was a fine bed of crimson roses, too, which were staked down, and thus kept from branching; and another of white yucca, near the bed of portulacca, cooling the eye after its bath in that bed of fire with its snowy and abundant blossoms.

Near the north end of the house, if you examine the plan, you will find a thick, impervious shrubbery, bounded on one side by the carriage road and on the other by the path bordered with flowers to which we have referred above. This shrubbery in summer entirely conceals that portion of the garden which lies north of it, and is traversed by a winding path having near one end the Rustic Hermitage, and near the middle the small Rock-work devoted to those plants which love that soil.

The Hermitage is a pretty, rural structure, neatly constructed of rough bark and logs, presenting an attractive object in the walk, and furnishing a cool retreat from the burning heat of our midsummer noons. At one end you may see the bee-hives — homes of the little “singing masons building roofs of gold,” who find their favorite food of lemon thyme covering the rocks near by. The Rock-work is a pretty sight in summer, with its fine beds of moss and thyme, and its stately ferns, under whose shadow the hare bells and columbines grew fair as in their native woods. It is surprising to see how delicate the plants are that thrive best on rocky soils, and flourish from the crevices of stony places.



THE HERMITAGE.

This little rockery is one of the pleasantest features in the garden; it is quite secluded, and has scarcely any outlook. Beyond the thickly planted plat of which we

have been speaking, you may see, by following the plan, that the path we took at first, carries us round a large and open lawn. Near the center stands the large bronze cast of the Borghese Vase, sent to Mr. DOWNING from France early in last spring, and which forms a very marked feature in the northern part of the garden. This vase, which is a cast of one in the gardens of the Villa Borghese, near Florence, is of bronze, and is covered with bacchanalian figures in very high relief. The artist CRANCH has painted a lovely view of the garden from a spot on the opposite side of this lawn, toward the Hermitage; where the mountains on the opposite shore, with the sail-covered river flowing between, and this vase in the foreground, combine to form a landscape more beautiful than is often seen, and of which the vignette placed at the head of our article can give but a faint idea.



BORGHESSE VASE.

It will be remembered that before Mr. DOWNING took this place, by far the greater part of it was planted as a nursery; and in altering it to its present shape, a large proportion of the fruit trees had to be entirely given up or transplanted. Such as remained were placed where they would be most useful as screens and yet not intrude upon the sight, since a tree cultivated for its fruit alone is seldom an ornamental object;—beautiful of its kind it may be, but seldom as seen side by side with other trees. Wherever the nursery trees could be left without interfering with the proposed arrangement of the grounds, they were so; and thus we find the path at the northern end of the garden, in which we are now walking, walled on one side with fruit trees mingled with flowering shrubs. The lawn, around which this path runs, is studded with those circular beds of flowers to which I have before



ARBOR.

alluded,—beds of verbenas and roses, but chiefly of petunias—piled blooms of purple and white,—flowering far into the autumn months. Beside these, there is a pretty conceit—a guilloche bed of verbenas shaded from the richest scarlet up to pure white, and two hanging tents of wire covered with the beautiful cypress vine. On this walk, too, is a little Rustic Arbor, sitting in which on summer days, one saw the freighted river and flowing mountain line, which, clear against the sky, divided its paler blue from their deep azure; and the village on the roll-

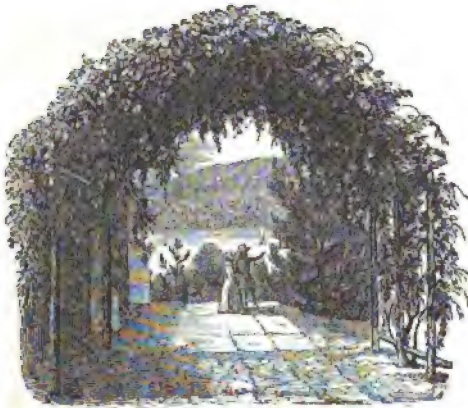
ing land between the water and the hills, with its clustered houses thick in one place but scattered on the outskirts, with here and there a larger house or stately mansion

"Bosomed high in tufted trees,"

and gladdening the eye with its hints of home and hospitality amid the universal tender green. Continuing on this path, it becomes narrower, and leads through the shrubbery to the carriage road, which widens at the north end of the house sufficiently to admit of a turn, and then, resuming its original width, leads to the rear of the building and to the fruit orchard, hidden from the view by the espalier with its leafy curtain of nectarine and peach. Extending from the western side of the house we see the office, giving to the structure a pleasing irregularity, and having on the south the little Entrance Porch which is before shown in our vignette.

The orchard contained Mr. DOWNING's choice fruit—principally plums, nectarines, and peaches, with some of the finer sorts of pears. In other parts of the garden there were fine beds of strawberries—many sorts, and each in its

perfection; raspberries also were in great abundance and beauty, together with fine apples and, as we have seen, great store of grapes. At the end of the orchard the carriage road again widens, and at the left a narrow path running in front of the greenhouse, connects the two ends of this road with each other. Over this path is trained the Wistaria Vine on a rustic trellis, and through it you get a lovely picture of the river and the Fishkill mountains circled by the leafy and luxuriant climber for a frame.



WISTARIA VINE.

I have thus led the reader through the garden, and endeavored to convey to him some idea of a place which can not long remain as the owner left it, and which he died without carrying to perfection. It is not an extensive place; it had no great vinery, no mammoth hot-house nor conservatory; there is no aviary, no fountain, no Victoria Regia, no pinery, no palm-house. In the garden one looks in vain for a complete collection of any one plant. Mr. DOWNING had no passion for evergreens; no absorbing desire to include in his garden's attractions every species of heath, or rose, or dahlia. In the house there are no rare paintings, no marbles, no cabinets of gems, no portfolios of rare engravings, no shelves laden with costly books. If Mr. DOWNING's fortune did not warrant this, no less did his taste forbid his running to extremes of any kind. His garden is small indeed; but it had more beauty of arrangement, more beauty of natural scenery, artistically made a part of the place,

than many a place we know of, whose owner is possessed of far greater wealth. Many of Mr. Downing's trees, both fruit and ornamental, were rare and costly specimens, either imported from abroad or presents from his friends; many of them were natives of our American woods, of which he was justly proud. All were treated with the most assiduous and scientific care, and were models of their kind. Mr. Downing has shown in his garden and in his house how much beauty and comfort lie at the doors of those whose means are not very extensive, but who are willing to bestow care, and able to bestow taste upon their places, however small.

We have no doubt that many a man who looks at the plan which accompanies this sketch, will be inclined to wonder at the praises which have been bestowed upon the garden. But when he comes to examine, step by step, the nice arrangement, the artistic eye guiding the hand in the planting of every shrub and tree, the hundred effects of light and shade, the charming landscape, now revealed between the thickets, and now stretching before him with a foreground of lovely flowers and shrubs; and when he comes to learn that none of this is the effect of chance, but that in the owner's mind there existed the capability of seeing beforehand the result of his labor, and that he thus worked with certain knowledge of its final issue; he will understand that no common skill has been at work upon this haunt of beauty, and that in its completeness of design and perfection of execution it is the successful competitor of far grander and more ostentatious places.

We are glad to be able to show the friends, to whose immediate ear Mr. Downing month after month so acceptably appealed, a view of the place in which he lived and labored, which he loved as the spot where he was born, and where so many happy hours had been passed, and which to every lover of the beautiful in nature, and to every friend of those arts which surround our homes with refining beauty, will be a place around which affectionate memories will gather, as long as affection and gratitude endure.



THE WARWICK VASE.

NEW PEARS THAT PROMISE WELL.

BY HON. MARSHALL P. WILDER, BOSTON.

IN conformity with your request, I herewith annex brief descriptions of some of the more modern pears which promise to be worthy of extension. Great caution, I am aware, should be exercised in recommending new varieties for general cultivation. The system, therefore, which has been adopted by the American Pomological Society, of placing such as "promise well" on the probationary list, is safe and worthy of commendation. I regret, however, that time did not permit, at its late session, of a longer discussion of this class; and it is mainly this consideration which induces me to communicate the result of my own experience.

The year 1852 will long be remembered, by us of this region, as one of the most propitious in the annals of pear cultivation. After two or three unfavorable seasons, we have at last had an opportunity to test a large number of varieties which have been recently introduced, or of which but little has been known, and to judge of their characteristics with considerable accuracy.

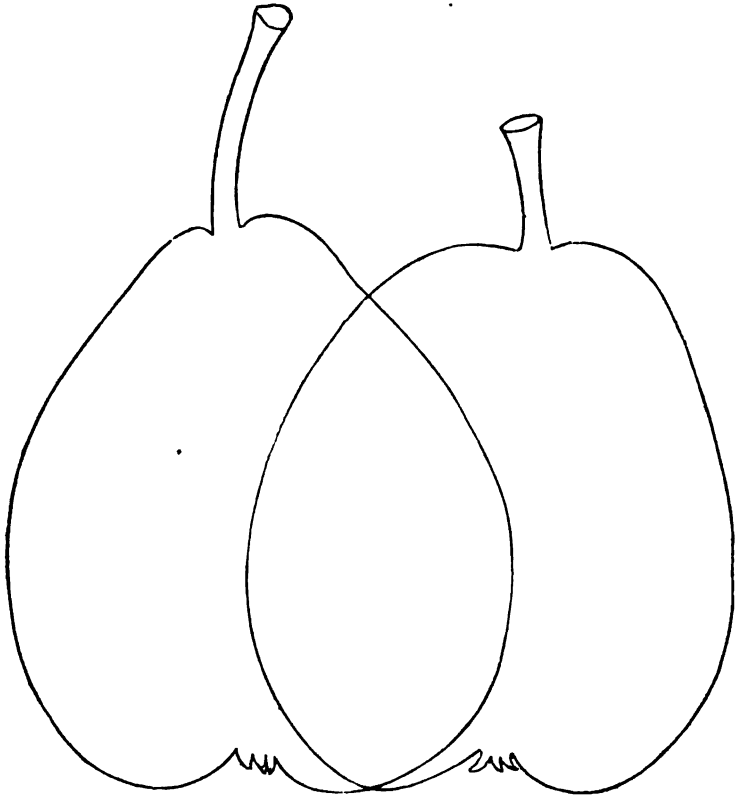
Much depends on the soil, exposure, mode of cultivation, the maturity of the tree, and the temperature of the season; but quite as much depends on the process by which the fruit is preserved and ripened. This latter remark is peculiarly applicable to the very late sorts; and we apprehend that much is yet to be learned, not only as to the general process, but as to the particular means suited for different varieties. That the flavor of fruits may be preserved, or improved, by the manner in which they are kept previous to maturity, has been satisfactorily ascertained. This subject is now awakening general attention; and we are happy to know that quite a number of fruit rooms have been constructed in our vicinity, on the plan of non-conducting walls, so as to maintain an equable temperature and a proper hygrometric state of the atmosphere; both of which are considerations indispensable to success.

These improved facilities have enabled us to test, by a fair trial, some varieties which came to us from Europe, well recommended, but which have hitherto been considered as of doubtful character; and the result in several instances has shown that the fault was not in any natural deficiency of quality, but for the want of proper care in ripening the variety. As instances, we would name the *Doyenne Goubault*, *Josephine de Malines*, and *Nouveau Poiteau*, all of which may be classed as "very good." Some varieties ripen with greater ease than others, such, for example, as the *Beurre d'Arenberg*, *Winter Nelis*, and *Lawrence*, the great difficulty being to retard them from maturing during the warm autumn days. Others, like the *Easter Beurre*, *Doyenne d'hiver nouveau*, *Beurre Bretonneau*, and most of those with a thick, rough epidermis, are readily kept through the winter and spring, and into the summer. Some of this class we have preserved in perfect condition the past season, and had them in eating, with the *Madeleine*, in August.

As a general remark, it may be said that such varieties as are of a delicate character, either as it regards skin or cellular texture, when exposed to a temperature so

low as to arrest the ripening process *entirely*, often lose the power of resuming it and are consequently immature, tasteless, and deficient in flavor. Others will endure a great degree of frost, and seem not to be injured when frozen entirely through. We have known instances where the latter class have remained under the trees during the winter, and, although frozen hard, were not injured in the texture or flavor of the fruit, and which afterwards ripened perfectly.

With these preliminary remarks, I submit the following list as promising to be worthy of general cultivation:—



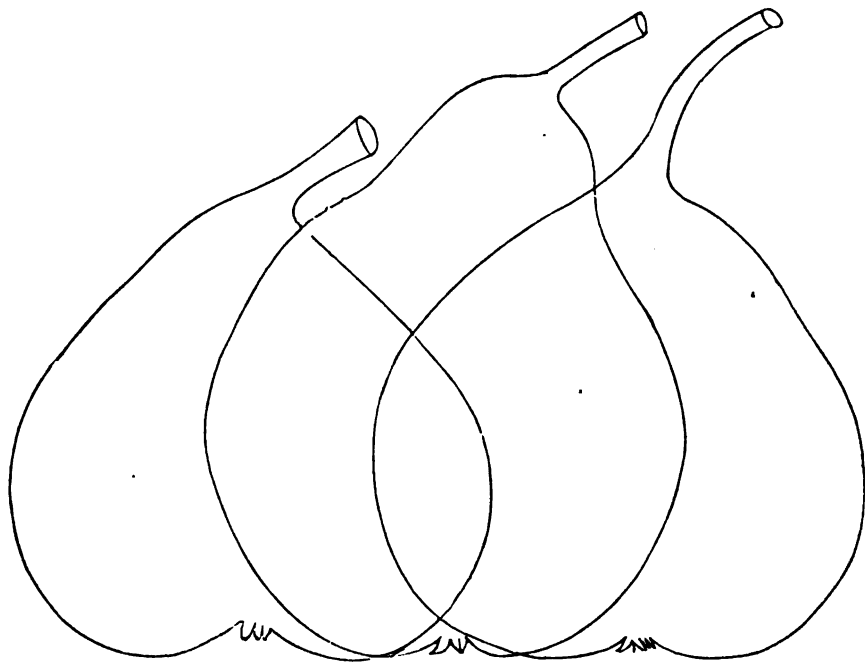
LAHERARD.

BEURRE STERKMAN.

BEURRE STERKMAN.—Size—above medium. Form—obtuse pyriform. Calyx—open, moderately sunk in a broad basin. Stem—short and stout. Color—dull green ground, nearly covered with russet. Flesh—white, melting, with abundant juice. Flavor—very rich, sub-acid, highly perfumed, and resembling in this respect the *Lodge* or *Smith's Bordenave*. Season—October 1st to 15th. Class—"very good," if not "best." Bears well either on the pear or quince stock.

LAHERARD.—Size—above medium. Form—obovate, obtuse pyriform. Calyx—closed, generally without segments, deeply sunk. Stem—rather stout, one to one and

a quarter inches long, a little depressed at insertion. Color—pale lemon yellow, with brownish red cheek next the sun. Flesh—white, melting, juicy. Flavor—rich, pleasant sub-acid, excellent. Season—October 1st to 15th. Class—“*very good*” or “*best*.” This variety succeeds admirably on the quince, resembling in its habit and foliage the *Urbaniste*, but is a distinct sort.



DOYENNE GOUBAULT. FONDANTE DES CHARNEUSE. CHARLES VAN HOOGTEN.

FONDANTE DE CHARNEUSE.—Size—large. Form—obtuse pyriform, surface and outline irregular; neck, short and thick. Stem—short, thick, and inserted without depression. Calyx—small, moderately sunk in a narrow ribbed basin. Skin—dull yellowish green, coarsely dotted and clouded with patches of russet. Season—October to November. Class—“*very good*.” Flesh—melting and juicy, with a rich saccharine perfumed flavor, and sometimes a little astringent.

CHARLES VAN HOOGTEN.—Form—obovate, acute pyriform. Size—above medium. Skin—dull pale yellow, thick. Stem—stout, set without depression, enlarged at the base. Calyx—open, in broad and flattish basin; segments, short, frequently abortive. Flesh—yellowish white, melting, buttery, and juicy. Flavor—saccharine, rich, with pleasant aroma. Season—October 1st to 15th. Class—“*very good*.”

DOYENNE GOUBAULT.—Size—medium, occasionally large. Form—obovate, acute pyriform. Stem—short and thick. Calyx—small, deeply sunk. Color—dull pale yellow, with a few traces of russet, particularly at the stem and calyx. Flesh—melting and juicy. Flavor—rich, sweet, aromatic. Season—December to February.

Class—"very good." Keeps well, and promises to be a very fine winter variety. Succeeds better on the pear than on the quince, and adheres well during the autumn gales.

MILLOT DE NANCY.—Size—medium. Form—obtuse pyriform. Color—pale yellow, with occasional patches and traces of russet. Flesh—melting and juicy. Flavor—sugary, with pleasant and peculiar aroma. Season—January to February 7th. Class—"good."

CONSEILLER RAMUEZ.—Size—full medium. Form—obovate, obtuse pyriform. Color—dull green, slightly clouded and traced with russet. Flesh—melting and tender, with a moderately sweet perfumed flavor. Season—October to November. Class—"good." A great bearer and vigorous grower, both on the pear and quince stock.

ZEPHIRINE GREGOIRE.—Form—globular, acute pyriform, broad across the body, tapering into a thick, fleshy stem. Color—dull green, thinly clouded with a gauze-like covering of *russet*; cheek, brownish red. Flesh—very melting, tender and juicy, with a rich flavor, a little perfumed. Season—middle of November. Class—"very good." Excellent.

POIRE D'ABONDANCE.—Size—above medium. Form—oblong pyriform, neck thick. Color—pale yellow, with numerous russet dots, mottled and intermingled with vermilion and red on the sunny side. Flesh—melting and juicy, with a sweet, delicious flavor. Season—middle of October. Class—"very good." A handsome fruit.

(To be continued.)

THE STYER PEAR.

BY W. D. BRINCKLE, M. D., PHILADELPHIA.

UNDER this name, at the recent meeting of the American Pomological Society, Mr. ALLAN W. CORSON, of Montgomery county, Penn., exhibited specimens of a fine pear, supposed to have originated in that county; and which, after a careful examination by the committee on native fruits, was reported to the Society as a pear of the "best" quality. The same gentleman, in 1851, sent specimens of this variety to the Pennsylvania Horticultural Society; and so favorable an impression did it make, that Mr. CORSON was desired to furnish us with all the information he could obtain, in regard to its history. In compliance with this request, the following particulars were communicated by him:

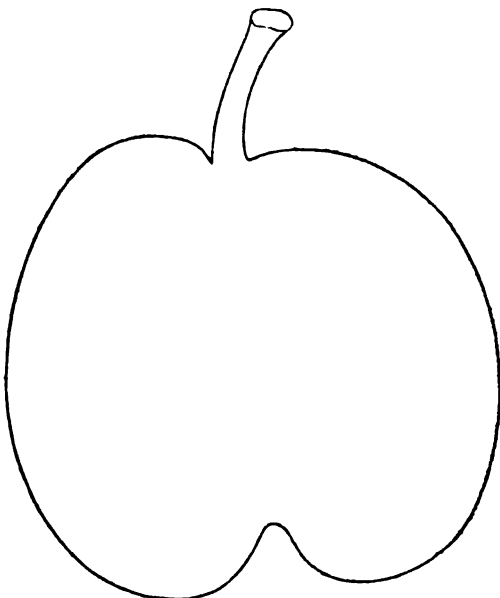
About sixteen years ago, Mr. CHARLES STYER, of White Plain township, Montgomery county, residing some fifteen miles from Philadelphia, engaged a man to make a fence for him. Mr. STYER happened, at the time, to say something about having some pear stocks grafted; on hearing which, the fence-maker said he knew where there was a fine kind, and would bring him some of the scions. He accordingly fulfilled his promise, and the scions were inserted; but it was never known

where he obtained them, and he died without imparting the information. From these grafted trees, however, the variety has been propagated to some extent in that neighborhood.

The *Styer* is represented to be an abundant bearer of fair and perfect fruit, commanding a high price.

Fruit—medium size, about two and a half inches long by two and three-quarters wide. Form—roundish. Skin—green, becoming yellow, with many russet dots and markings. Stalk—three-fourths of an inch long, varying in thickness from one-sixteenth to one-eighth of an inch, and inserted in a small shallow cavity. Calyx—almost obsolete. Basin—narrow, moderately deep. Core—medium. Seed—blackish or very dark brown, short, rather plump, with a slight prominence or angle on one side of the broad extremity.

Flesh—yellowish white, somewhat gritty at the core, buttery, melting. Flavor—exceedingly rich and perfumed. Period of maturity about the first of September.



STYER PEAR.

[American Pomology is greatly indebted to Dr. BRINCKLE for his able and zealous efforts in the introduction of native fruits. To him do we owe our knowledge of the *Kingsessing*, the *Lodge*, the *Ott*, and many other of the best native fruits, especially those of Pennsylvania. He has not contented himself with seeking and bringing to notice chance seedlings of merit, but has by skilful hybridization *originated* some valuable acquisitions. Some of his raspberries are already well known; but we have heard of one of which little has yet been said, that promises to be a beautiful and fine fruit, and quite distinct. It is, we believe, called the *Orange*. It is now being propagated extensively in Philadelphia.

Pennsylvania is at this moment quite awake (as a great State with such a soil and climate ought to be) on the subject of fruit culture. We were strongly impressed with this during the session of the Pomological Society last autumn. Dr. BRINCKLE has done much to arouse this spirit. A glance into his album enabled us to judge of the extent and minuteness of his researches. He possesses much of the spirit of the late Dr. VAN MONS, the great Belgian pomologist.

We are happy to present from his pen a description and account of this fine Penn-

sylvania pear, the *Styer*. It came before us, on the committee of seedling fruits, at the late meeting of the American Pomological Society, and we were much pleased with it, as all were who saw and tasted it. We carried some specimens home with us, and although quite ripe when we left Philadelphia, on our arrival at home we found it perfectly sound and its flavor unimpaired. It possesses considerable *distinctness*, a quality to which we assign some importance. The *Doyenne Robin*, a new foreign sort, resembles it more than any other that we recollect at present; but the stalk of this is twice as long as that of the *Styer*, and the skin of the latter has a peculiar marking of russet.]

ON THE MANAGEMENT OF WATER.—ITS USES AND ABUSES.

IN every part of our country where the surface is at all hilly or undulating, the multitude of transparent streamlets offer, to those who are fortunate enough to live in their vicinity, many opportunities of using them for purposes of convenience and ornament, at a very small expense. That these opportunities are generally neglected, or miserably improved, every one can testify. How often is it the case that a small, but perennial brook, is found running through a tract of useless, rushy ground, perhaps filled with springs, and bounded at varying distances by high banks; in some places rocky and precipitous; in others sloping at a greater or less angle; now covered with short turf; again clothed with shrubbery, the kalmia and azalia mingling with the graceful hemlock and feathery birch; or a dense wood of larger trees graces the summit of the slope. These banks—sometimes retreating from the water, and again advancing, so as to form a narrow ravine almost shutting up the passage of the brook itself—offer every advantage for throwing across a dam at a slight expense; and thus, in many situations, producing the effect of a beautiful natural lake, of great depth and extent. In other places, where the form of the ground does not admit this, the cheapness and facility with which water may be brought in lead pipes, bored logs, or what is much used in England and is preferable to either, glazed earthen tubes, would bring a sufficient supply of water; not only for domestic purposes, but for those of ornament. Fountains might be supplied, and any convenient hollow, either natural or artificial, be converted into a miniature lake, well suited as an accompaniment to a flower garden, or an opening in a grove. If the supply be abundant, a small cascade, well and tastefully managed, might produce a beautiful effect. The small supply of a hydraulic ram may afford water sufficient for some ornamental uses.

But, in all these cases, everything depends on the taste with which the affair is managed. From the lake half a mile long, to the pipe of an inch bore, anything of this kind may be rendered perfectly ridiculous by mismanagement. A plain stone wall or wooden dam, for the lake; and an animal with the wings of a duck, the body of a goose, and the neck of a swan, vomiting a thread of water no larger than a goose quill on the round, muddy pond, three yards across, for the small pipe; are

qually absurd. In forming a lake, the first object should be to clear the bed of all vegetation, and if possible cover it with sand. If in any part of the bank there is marshy, or shallow spot, it may be planted with the white-flowered arrow-head, (*Sagittaria*;) the blue water-plantain (*Alisma*;) the yellow golden-club, (*Orontium*;) the dark purple side-saddle flower, (*Sarracenia*;) and the golden water lily, (*Nuphar*;) in the deeper water, the floating gems of the pond lily, (*Nymphaea*;) or the noble flowers and leaves of the *Nelumbium*, will add much to the beauty of the scene. Even the *Calla Ethiopica* is said to flourish, if planted in water just deep enough not to freeze the bottom in winter. It would take too much space to give directions for the whole management and planting of the banks; that can alone be determined by the form and nature of the ground. But one rule may be laid down: Every art should be used to conceal the actual extent of the water, thus leaving its size to the imagination; no one view should take in the whole, but several stations should overlook the same part of the water with different fore and back-grounds, and its source should be hidden by thick wood. The dam, whether of stone or wood, should be constructed in the firmest manner, with a deep waste-way to let off all superfluous water, and large enough to drain off all the water if necessary, for destroying weeds, or for repairs. The lower side of the dam should be made as much as possible to resemble a natural mass of rock. In building with stone, this is easily accomplished by using large masses, and making the lower and larger ones project irregularly; a smaller size above them; and so on, to the top. The dam should not, in most cases, be at a right angle with the stream; but in such a position with regard to both banks, as to appear a natural obstacle. The top of the dam should be managed in the same manner: the stream perhaps not falling over the whole, but carried over on one side; or, if the stream is abundant, divided by a large stone in such a manner as will produce the best effect from below. It will seldom answer to attempt a single pitch, unless the dam is very high, and the stream a large one. It is better to conduct it rushing over the stones with all the foam and fury possible. In all such constructions, remember "*Ars est celare artem*." Let not a particle of mortar appear; let the exit of the waste-way be concealed by overlapping stones; and wherever it can be done, plant shrubs and creepers in the crevices of the rock, first filling them up with good soil. After all written directions, the eye of taste alone can perfect such a work as this. If the dam is of wood, which is to be avoided if possible, the only way is to heap masses of stone against its front to conceal the logs, and continue them above the top line of the dam, letting the water flow over, or through them, as you best can. One more thing let me advise: Never attempt to dam a beautiful ravine, with abrupt banks feathered with wood, and the brook rushing and brawling over crag and stone. A narrow, simple walk, conducted now by the side of the brook, now on some overhanging bank, and anon hidden in the copse-wood, is almost the only improvement such a scene will admit of. One of the most effective situations for a dam is at the head of such a ravine, where it is overhung and darkened with large spruces or hemlocks; with perhaps a rustic bridge of two or three logs, with a simple hand-rail, thrown over just below the fall.

In the management of small quantities of water, the great difficulty is always attempting to do too much. No active fountain should be made in the open air, unless the stream can be at least an inch in diameter at the point of emission, and with force enough to throw it fifteen feet high; anything less than this looks puerile and miserable. Where the supply of water is small, a dripping fountain is in far the best taste. A basin of any material, from the coarsest common stone to white marble, with a block of the same in the center supporting a graceful vase in which the water boils up and falls gently over the rim into the basin, will give more pleasure both to the eye and ear, than any other application of the same quantity of water. A small, clear stream, may be made to break from an apparently natural fissure in a mass of rock-work, and flow down its side into a pebbly basin below; a graceful nymph may pour water from her urn; or many other beautiful uses may be made of even a small quantity of water, always provided it be of crystal purity. But by all means avoid making the likeness of bird, beast, or fish, throwing water from its mouth; in spite of its frequent use in celebrated fountains, this is too much like one of the most disgusting ills that flesh is subject to, to be anything but revolting to good taste.

A few words concerning the economic use of water, where the sheet is clear, perennial, and principally supplied by springs. A large pond may soon be stocked with trout by procuring a few dozen from the nearest brook. These, if not fished for three or four years, will afterward, even from a small piece of water, furnish an abundant supply for a family. Where the water is not considered pure enough for trout, the yellow perch may be introduced; or I suppose the European carp may soon be procured from the Hudson. But by all means avoid introducing pickerel or eels; both are destructive of other fish, and the first seldom attains a large size in small ponds. In the smaller basins the golden carp or gold-fish may be used; or our native roach or sun-fish (*Pomotis*) are almost as ornamental. *

Hartford, Conn.

PEACHES AT THE SOUTH.*

BY WM. N. WHITE, ATHENS, GA.

OUR remarks upon the peach will be concluded by a few notes upon the varieties cultivated here, in regard to quality, time of ripening, and productiveness. The times of ripening of the peaches described below, are for 1850 and 1851, as the crop the past season was greatly injured by frost. They are described in the order of ripening.

1. *Columbus June*. Brought here from Columbus, Ga., and said to be a native of the State. Leaves—with uniform glands. Flowers—small. Fruit—medium size to large, flattened or slightly hollowed at the apex. Suture—shallow. Skin—pale yellowish white, with a rich red cheek towards the sun. Flesh—slightly red at the stone, melting, juicy, sweet, and high flavored. A good bearer and an excellent peach for its season, in every respect. Ripens 20th of June. Indispensable.

* Continued from December number.

2. *Early York*. We have a peach from the north, without the name, which I think is this variety. An excellent peach, very juicy, and in every respect worthy of cultivation. June 20th.

3. *Walter's Early*. Bears an abundant crop of melting and delicious fruit, which ripens about the 1st of July. Not so easily injured by frost as many others. Succeeds as far south as Mobile. Likes a sandy soil.

4. *Red Rareripe*. Ripens about the same time. Bears well, and is a great favorite here. Fruit—melting and high flavored.

5. *Strawberry*. Generally ripens about the 1st of July, and if allowed to overbear is of but ordinary quality. This year a few escaped the frost, and ripened some six days earlier than usual and were very delicious; if well thinned, always so.

6. *Royal George*. This peach is not inclined to overbear, but ripens a moderate crop of delicious peaches about the 4th of July.

7. *Coolidge's Favorite*. The peach received here under this name bears finely, and ripens about the 5th of July, but is too acid and poor to cultivate. We may not have the true variety.

8. *Early Admirable*. Ripens about the 5th of July. Productive, large, and good. It will stand a frost, without much injury, that will cut off *Grosse Mignonne* entirely. Bore a good crop this season. One of the best.

9. *Early Newington Free*. Another hardy, excellent variety, bearing a fair crop the present season in spite of the frost. One of the most desirable peaches grown. Ripe July 5th.

10. *Grosse Mignonne*. This is, perhaps, the best free stone peach cultivated. Fruit—large, beautiful, and delicious, excellent in every respect. Ripens July 8th. If it has a rival, it is

11. *George IV*. Which ripens a day or two later, and is in general equally esteemed with the foregoing for beauty and excellence.

12. *Malta*. Ripe the 10th of July. Large, juicy, and good.

13. *Morris' Red Rareripe*. Ripe about the middle of July. Productive, melting, and excellent.

14. *White Blossomed Incomparable*. Ripe the 15th or 20th of July. Nearly always wormy, and not worth cultivating. Of only second rate quality.

15. *Crawford's Early*. One of the best cultivated, always large and fair, and pretty hardy. Ripe middle of July. Fruit often nine inches in circumference.

16. *Bellegarde*. This peach came here as the *Red Magdalen*. It is hardy and productive. Will stand frost better than most of the good varieties. The fruit is melting and delicious. One of the best. Ripe about the 20th of July.

17. *Noblesse*. Ripens about the 20th of July, and very excellent. Well worth cultivating, even in small collections.

18. *Belle de Beaucaire*. Received by Mr. CAMAK from Mr. PRINCE. Leaves—with globose glands. Flowers—small. Fruit—very large, (about the size of *Crawford's Early*) roundish, with protruding point at top. Suture—very shallow, but distinctly marked from apex to stem. Skin—light yellowish green, with cheek slightly reddened.

Flesh—greenish yellow, and light red at the stone; a little coarse, but delicious; full of a very rich, slightly acidulated, juice. Tree—thrifty, bears regularly and sufficiently abundant. Skin slips readily from the flesh without the use of a knife. Ripe the last of July. One of the best.

19. *Late Red Rareri*pe. Ripens last of July. Productive and good.

20. *Royal Kensington*. Ripens the first of August. Somewhat resembles *Grosse Mignonne*, but dryer and not so good.

21. *Late Admirable*. Ripens the 1st of August. One of the very best late peaches. Lasts till the middle of August. Still not equal to *Grosse Mignonne*.

22. *Morris White*. Ripens early in August. This peach is very apt to be wormy. I have never seen it first rate, always acid and somewhat astringent.

23. *Crawford's Late*. A magnificent peach, large and productive. Ripens early in August. One of the very best. Indispensable.

24. *Ispahan*. Received under this name, but is not the *Ispahan* of the books, but seems to resemble very much the *Red Cheek Melocoton*, and is perhaps identical. Generally a large and rather fine variety. Ripens about the 10th of August.

25. *President*. One of the indispensable varieties. Ripe about middle of August.

26. *Green Catherine*. A large and productive peach, but inferior to the foregoing, and apt to be wormy. Ripe August 15th.

27. *Newington Cling*. Ripe about the 10th of August. One of the best of the clings—rich and juicy.

28. *Pace, or Tinley*. Ripe middle of August. Fruit—large to very large in size, oval, pointed at apex. Skin—of dull, dark, purplish red, covered with a thick, dull, grey down. Flesh—dark red, marbled with orange, moderately juicy; rich, not too acid for most tastes. Productive, and very hardy. Resists frost better than most peaches. Skin peels off readily when fully ripe. Loses flavor if over ripe. Externally, the color is something like *Blood Cling*. A freestone and a great favorite in most parts of the State, but not first rate. Reproduces itself from the stone.

29. *Red Cheek Melocoton*. Ripe middle of August. A beautiful and productive peach, of fine quality, but not the best. Merits cultivation for its hardiness. Ripens much earlier some years than the time above specified.

30. *Lemon Cling*. In this climate delicious; one of the best of the clings. Ripe 10th of August.

31. *Yellow Blanton Cling*. Ripe 20th of August. Leaves—large, with globose glands. Tree—thrifty and healthy. Fruit—large, and in general shaped like the *Lemon Cling*, with the same projecting swollen point. Skin—rich orange, with a slightly red cheek. Flesh—orange yellow, firm, but full of a delicious vinous juice. Originated here. Later and of better quality than *Lemon Cling*. To my taste the best of the clings. Reproduces itself from seed.

32. *Parie de Pompone*. A magnificent looking peach, but the flesh is too coarse to be a favorite.

33. *Blood Cling*. Ripe the 20th of August, but unfit for eating. When very ripe it is barely tolerable. Don't know any reason why it should be cultivated.

34. *Tippecanoe Cling*. Ripens the latter part of August, and is large, juicy, and fine. One of the best.

35. *White English Cling*. Leaves—with globose glands. Fruit—very large, and oval. Suture—slight, with a swollen point at top. Skin—clear, creamy white, with sometimes a slight hue of red on the sunny side. Flesh—delicate white, free from red at the stone, to which it firmly adheres; very rich, juicy, and high flavored. As it is entirely free from color, it is the very best for preserving or for brandy peaches. Has no tendency to be wormy, as most white peaches have. Ripe early in September. Grows true from the stone. Very valuable for its lateness and excellence. Widely known here. Brought originally from Virginia.

36. *Bough*. This is the next named peach of first quality that ripens after the *White English*. A native of this State. Leaves—with globose glands. Fruit—medium size, roundish, terminated with a small point. Suture—obscure. Skin—pale yellow, almost white, with a slight blush towards the sun. Flesh—yellowish white, melting and juicy, with a sweet, pleasant flavor. By far the best fruit of its season. Indispensable. Freestone. Ripe 1st of October.

We have three peaches, of pretty good quality, without names, two of which were received from Mr. PRINCE, by Mr. CAMAK, with the statement that they were too late to be valuable in that climate, and the other obtained by Mr. CAMAK from an old field in this State, all of which are really valuable, as they ripen between the 15th of September and 15th of October. We have also a *Cling* of very good quality in warm seasons, that ripens the 1st of November; making it possible to extend our peach season from the 20th of June till about the middle of November, in favorable years.

Of the above peaches, the best ten for a succession, in this climate, are *Columbus June*, *Walter's Early*, *Grosse Mignonne*, *Crawford's Early*, *Belle de Beaucaire*, *Crawford's Late*, *Newington Cling*, *Yellow Blanton Cling*, *White English* and *Bough*. Add to these *Early York*, *Early Admirable*, *George IV.*, *Bellegarde*, *Late Admirable*, *Late Red Rareripe*, *President*, *Lemon Cling*, *Tippecanoe*, *November Cling*, and the unnamed varieties above for October, and the collection is quite as large as desirable.

ATTEMPTS AT A BUSH SETTLEMENT.

BY AN ENGLISH OFFICER.

CHAPTER I

ARRIVING in Upper Canada, the promised land, where I had deemed it quite an easy task to make "the desert blossom as the rose," and meeting with a few old friends whose knowledge of the wants of "bush life" was about equal to my own, the glowing description which Capt. H., of the army, and Capt. M., of the navy, gave of the location which they had taken up in Harvey; and the offer of the use of Capt. H.'s house, not yet finished, until I could get one up for myself; induced me to visit that section; and Capt. M. volunteered to be our "compagnon de voyage and chaperone" in Capt. H.'s boat, as the greater part of the route was by water. Accompanied by my wife in an open wagon, with the rest of our party, we started early in the morning for Mud Lake, seven miles from Peterboro'. There we found the captain's boat and crew waiting for us. Quickly got on board, and fairly embarked on Mud Lake, we left the last traces of civilization behind us. Having passed the Indian village, and entered Buckhorn Lake, we were delighted with the beautiful though wild scenery through which for twenty-five miles we pulled on Pigeon and Great Bald Lakes, until darkness overtook us in Little Bald Lake, where we were to land, and we saw the bright beams of the signal fire, which guided us to the landing, at the foot of a high bare hill, from which its radiance spread in ruddy light over a superbly wild and romantic scene. Cold and tired, we reached the landing, and with no little chagrin learned that we had to walk above a mile and a half through the dark bush to Manitou Lake, upon which Capt. H.'s house was situated. However, the novelty and excitement of the scene, and a cup of fine old mulled port, which Capt. M. prepared at the "beacon light" while the young men were stripping dry cedar bark for torches, served to reconcile us more to our position; and the effect of our party, each individual not otherwise laden carrying a flaming torch through the closely wooded ravine leading from the one lake to the other, would have formed a study even for a REMBRANT or ROSA; while the dense wood resounded to the echoing chorus of a favorite hunting song.

Arrived at the house, over which the torches threw a warm and cheerful light, reflected upon the calm surface of the glassy lake calmly reposing in front, we felt the discomforts of the day surmounted, and prepared to enjoy the blazing fire which illumed the uncurtained windows. After stumbling over logs, planks, &c., we gained the door; and entering the hall, we might have imagined ourselves in a vast cage enclosed by transverse bars, illuminated by three blazing fires in the rooms with which it communicated. The fact was, that nothing but the outer shell of the house was completed, and the entire inside stood in its naked lathing, unconscious of the plasterer's coat. One of the intended sitting rooms, with a bed room off it, had been prepared in the best bush fashion for our reception, with a pine table, two benches, the

luxury of two chairs in the sitting room, and a rough bedstead of split cedar, with a small table and one chair in the bed room, through every wall of which the wind "roved wild and free" through the open lath-work. While supper was preparing, I fell to work, hammer in hand, to enclose the bed room by nailing up a most picturesque tapestry of buffalo, bear, and wolf skin robes, and blankets; and ere our venison steaks and patridges were on the table, I had completed our most Cruso-like apartment, which proved so comfortable, that I covered the walls of the other room in the same manner next morning.

Though it was late ere we got to rest, I was up early next morning, anxious to see the beauties of the situation of which I had heard so much; nor was I disappointed, for beautiful it certainly was—situated in the bosom of a small bay, two of which, separated by a ridge of moss-covered granite running out like a promontory, formed the bottom of a beautiful, clear, inland lake, about three miles long and one broad, with gently rising banks here and there broken by abrupt rocks bursting through the gentle acclivities, breaking the monotony and giving a picturesque boldness to the view. After breakfast, we sallied out on a tour of observation; and were so charmed with the situation and scenery, that we at once resolved to take up eight hundred acres next Capt. H.'s, including the adjoining bay and a fine level valley, covered with the choicest timber, stretching from it to Bald Lake; while the beautiful hill separating the two bays, offered a most romantic site for a house.

On our return, we dispatched a scow with a message for my servants and baggage from Peterboro', with provisions and all other requisites for a winter's campaign in the back woods. Mr. A., who came out with us, took up four hundred acres on the lake just above us, and returned in the scow to get his own supplies and make the necessary arrangements for us both. The weather was remarkably fine, and we spent most of our time roaming over our new estate, shooting patridges on the shore and wild ducks on the lake, and building castles in the air everywhere, till the arrival of our servants and baggage. Then commenced the hurry and bustle of unpacking, and all the preparations for a first attack on the primeval forest.

So impatient were we to commence, that, ere our own servants arrived, I made a contract with two men who came in search of a job, to clear ten acres in the valley at the head of the bay, at which they were at work when my people arrived, but who obstinately refused to undertake to cut all the timber level with the ground as I wanted; so I had to let them have their own way, resolved when they were done to cut all the stumps down, that they might not annoy the eye like those which I had seen all over the country. But they willingly agreed to leave as many ornamental clumps of trees standing as I chose. Having selected the hill as the site for my house, I got a shantee erected below it on the shore, for the accommodation of my people, and set them to work with their English hatchets and cross-cut saws to cut down the timber on the hill as it was usual to be done at home, close to the ground, with as little waste as possible; being determined, in our philanthropy, to teach "the poor ignorant settlers" how to cut down the timber without disfiguring the landscape with those hideous blackened stumps. I set them to work on the top of the hill, and

having got the timber down, untrimmed one tree over another, until we opened a circular space on the summit. We began on the outside of the circle, and by means of blocks and tackles, we drew the trees one by one inwards, with their heads toward the top of the hill, until the pile got so high that they literally had not room to fall or even to be dragged down.

In this dilemma I had to call in my choppers, who pronounced it impossible to clear up the hill until the timber got dry enough to burn sufficiently to get into it and cut it up. As we had expended above six weeks labor on about a quarter of an acre, and I was anxious to get the space cleared up for my house, I determined to burn it up some way. So having piled an immense heap of dry cedar trees, carried from the borders of the lakes, over my sylvan monument, I set it on fire in different places at night, and went out on the lake to enjoy the magnificent breadth of light and shade which the blazing pile threw over the surrounding landscape. The effect was truly superb at night; but in the morning it had a very different aspect, as the first persons I saw when I left my room next day were my choppers, who came to tell me that the fire had run over the ground where they had been at work, and left nothing but a bare rock behind. The statement seeming incredible, where there was such a growth of fine heavy timber, all hands started off together. The first place we came to was the hill, which presented the most desolate and miserable sight I ever beheld in the bush: the lofty trees stretched one over the other in the most chaotic confusion, charred and blackened, with their bare and spreading branches grappling with each other as if in final deadly struggle; while just beyond where the day before lay the rich black mold, with its thick, soft covering of crisp, dry leaves, nought was to be seen but the bare, flat, water-worn limestone rock, out of which solid bed the fine but now scorched and blackened trees seemed to spring up as if firmly rooted in the solid rock. A scene more utterly desolate I have seldom viewed; and as if to deepen the effect, the first snow storm of the season, descending in its fleecy shower, threw its cold and dreary mantle over the blighted scene.

The first shock of astonishment having subsided, we proceeded to examine into a phenomenon for which none of us could account, and found that the surface of black mold was only a few inches deep, spread over a laminated limestone rock, which had evidently at some remote period been the bed of a communication between the two lakes; and that the fine timber with which it was covered, sprung up from and was rooted in the interstices with which it was intersected, varying in width from four to eight or ten inches, and in some places very deep, and all filled up with black mold, formed by the accumulation of decayed leaves and other vegetable matter. After a careful examination, being fully satisfied that the whole tract was of the same quality, and totally unfit for agricultural purposes, we resolved to start the next morning for Toronto, and get the Governor's permission to exchange my unfortunate location, and made preparations accordingly. But even in this I found that I had reckoned without my host; as the ice, though not strong enough to be traveled over, was too strong to force a boat through, and there was not even a practicable bush blaze to guide us

by land ; so that we were virtually imprisoned, and without the assistance of either frost or thaw, would have to remain so.

However, in a few days frost came to our rescue ; and the ice seeming sufficient to bear us, attended by one man with a trunk and traveling bag on a hand-sleigh, and our guns on our shoulders, accompanied by my wife, we started at early morn on our return to Peterboro,' on foot, by a route considerably shorter than the one we came by water. After walking down Manitou Lake three miles on the glare ice, we had to cross the bush five miles to strike Buckhorn Lake, which being full of springs, its ice is at all times dangerous ; and on gaining the shore, we saw open water in many places where the current ran in the center, but apparently connected between the openings sufficiently to afford a passage. Having resolved to attempt crossing, we got safely over more than two-thirds of the distance, when we came to the current, where much of the ice seemed floating. Seeing one place which seemed firm across, we gained it ; and when about on the center of the frozen bridge, our weight broke it off from either side, and we found ourselves in an instant floating in open water on a small floe of ice, miles from any other human beings, and drifting swiftly to the boiling rapids about two miles below us. Our astonishment was quickly succeeded by the awe and dread of our perilous situation.

After a few moments consultation, we decided on attempting the only chance which seemed open to us. Both the wind and current were urging us to the rapids ; and about half way on the right shore, the one which we had been trying to gain, a point projected out so far as to narrow the channel to less than one-half, and the open water washed it. To strike the weather side of this point was now our only hope. So placing my wife on the hand-sleigh, with her cloak spread out for a sail to try to get steerage way, we got as near the larboard side of the floe as possible, and using the butts of our guns for paddles, we by degrees guided our frail and dangerous raft inside of the point, upon which we drifted in safety, and quickly sprung ashore to pay our grateful homage to Him who had so mercifully preserved us.

Afraid to trust ourselves again upon the dangerous ice of Buckhorn, we waded through the wet snow on its marshy banks for six miles, to the Indian village, where it connects with Mud Lake. Having become acquainted with many of the Indians in their hunting excursions at Harvey, we went at once to the chief's house, where we were most hospitably entertained and comfortably warmed and dried.

As the glare ice on Mud lake (which we had yet to cross, a distance of six miles,) was not yet fit to be traveled by horses, the old chief collected all the tribe in the village, got his own sleigh on the ice, placed us in it, and partly drawn partly pushed by the whole tribe of Indians on skates, we flew across the lake at an almost incredible speed. They would receive no recompense, and seemed amply repaid by having been able to serve the white lady. The farmer at whose landing we left the lake, seeing that we were so anxious to get to Peterboro' that night, would not harness his team to take us the seven miles, until I paid him down eight dollars—a practical proof of savage generosity and civilized extortion.

Thus ended our first attempt at a settlement in the bush.

Literary Notices.

ONE of the most interesting evidences of the advancement of rural taste is furnished in the attention given to this subject by the literary men of the day. We have now before us nearly a dozen works, all recently published, in which rural life and rural scenes form an important part. We shall notice such books as they appear, and give such extracts as we may find room for in our pages. G. P. PUTNAM, of New York has just published "Homes of American Authors," a beautiful volume of 366 pages, and containing nineteen fine steel engravings, and fifteen on wood, views of the "homes" of American authors. A glance at this work will show that men of genius love not the crowded city, but seek repose in shady groves, and inspiration in the music of feathered minstrels and bubbling brooks. We shall speak more at length of this volume in our next.

WALKS AND TALKS OF AN AMERICAN FARMER IN ENGLAND. By F. L. OLMSTED: second series. New York: G. P. PUTNAM & Co.

To be a good traveler, a man need possess what is called versatility in an eminent degree. In other words, he must be of such varied attainments, and of such an inquiring, curious, investigating mind, that he may see everything, hear everything, understand everything, and be able to describe and criticise whatever he may meet. There are, it must be confessed, few such travelers. The majority travel for special purposes, and pay little attention to what does not immediately concern them. That Mr. OLMSTED is of the few will, we think, be admitted by those who take up these volumes and accompany him in his "walks and talks" through England. In all his journeyings there is not a barren spot. Everywhere, and on all occasions he sees, hears, and derives impressions; and these impressions he gives in his own peculiar style, investing old and common place objects with a freshness and novelty at once entertaining and instructive.

His sketches of landscape, and of particular scenes and objects in the landscape, exhibit such glowing warmth of feeling, such a practical knowledge, as we would only expect in one exclusively devoted to the study of nature. He comes to a farm house, and with the same earnestness, the same keenness of observation and knowledge of detail, he gives a graphic description of all inside and out. Next he comes to an inn; and we have such a lively description of the master and mistress, and maid; the furniture, company, conversation and fare, that we imagine ourselves one of the company. The following is so good, and so characteristic of a class of English inns, that we cannot resist the temptation to allow our readers to enjoy it with us:

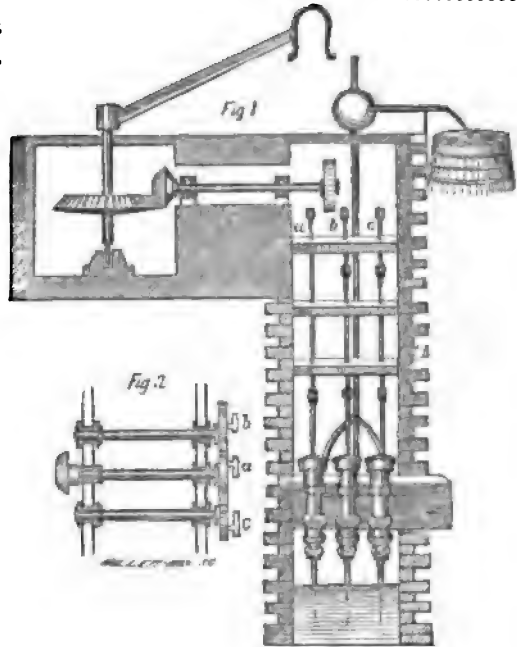
"Muddy, wet, and tired enough, I stopped at what seemed the last in the street, a house of humble appearance. I desired to be showed to my room. Master, mistress, maid, and boots, immediately surrounded and eyed me closely, and I could not but remember that I might, probably, bear a suspicious appearance to them. As I take off my cape, maid—a nice, kind

dry climate is an advantage instead of a drawback ; and it actually enables the Dutch, the Belgians, and the French, to supply Covent Garden market, in London, with garden products both earlier and better than the very skillful and energetic English market gardeners, with their abundant resources, can produce. Our summer climate is similar in many respects to that of France and Belgium ; and we are well persuaded that a general adoption of their thorough hydropathic system would work such an improvement on our garden esculents as would greatly increase their consumption, and enhance the pleasure and profit of that most useful branch of gardening. Another great advantage of an abundant supply of water, is the facility it affords for the application of *liquid manure*—a species of food that every good gardener regards as indispensable to the proper growth of kitchen garden plants, and of great importance to every branch of gardening.

Let us look at the question in an economical point of view. Under the present system, a very small garden in a dry time will consume the labor of at least one man in watering. He probably has to raise it with a hand-pump, and carry it in a common watering-pot from the barnyard, or at least a considerable distance, to the place where it is to be applied. The gardener is probably short of help, and many other things are suffering, so that he is compelled to stop watering as soon as he has given the most needy cases enough to keep them alive till next day. All his watering, all his labor and time, are expended in “keeping things alive.” Now suppose that two or three hundred dollars were expended at once in providing an efficient means of raising water into an ample reservoir, from which it could be conducted in pipes to the various quarters of the garden. One man could do more watering than five by the common system, and it could be applied in such quantities as would accomplish the desired end. The actual gain of time and increased products in two or three years would offset the original cost, to say nothing of the convenience, and the satisfaction that the gardener and proprietor both would derive from it. Under such an arrangement, dry weather would lose the terror with which it is now regarded, and the kitchen garden would assume an entirely new aspect.

We shall not at this time attempt any minute description of the various modes of raising water now practiced. The natural facilities that every man finds on his own grounds, or under his control, must guide him in the choice of means. Some may have access to streams, lakes, or other unfailing sources of supply on the surface of the ground, easily raised by a ram or force-pump, and conducted in pipes to a suitable place for a reservoir. Others may be compelled to sink wells, and raise the water with buckets or pumps. In such cases it is economy to sink the well in a place suitable for a reservoir, that the water may pass directly into it from the bucket or pump. The French market gardeners and florists in the neighborhood of Paris, whose arrangements are the most economical and convenient we have seen, invariably have a well in their garden, located on the highest ground. Beside the well is an ample reservoir, from which the water is conducted to all parts of the garden. Some of the more old-fashioned among them raise the water by means of buckets. A wooden frame is erected over the well, to support an upright shaft, on which is fixed a

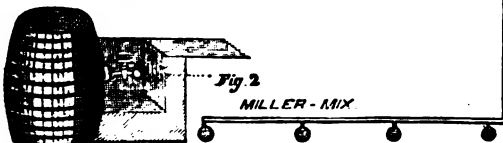
drum. This shaft turns on a pivot at both ends, and the rope that raises and lowers the buckets is wound on the drum. The rope passes over pulleys fixed in the frame immediately over the well, and there is a pole and whiffletree attached to the shaft, for the purpose of applying horse power. But among all the better informed and more enterprising cultivators, a pump, such as that represented by the annexed figure, has taken the place of the buckets, and is now in very general use. The cut explains its mechanism. It has three pistons, a vertical and a horizontal shaft, and is worked by a horse. Fig. 2 gives a side view of the horizontal shaft terminated by a wheel, *a*, which turns the wheels *b*, *c*. Each wheel has a spindle, to which is fixed a crank



fitted to the piston. Such a pump as this raises from three to five thousand gallons per hour, and costs about \$250 to \$300, according to the depth of the well.— From the reservoir into which the pump discharges, the water is carried over the garden in lead or cast iron pipes, and deposited in barrels or tanks at different points of the garden. These barrels are all sunk in the ground to within a foot or so of the top. Fig. 1 in the second plate represents this arrangement.

This is but an imperfect sketch of what we regard as the best system of supplying gardens with water that we have yet seen practiced extensively and with complete success. If our ingenious

Fig. 1.



countrymen will turn their attention seriously to this subject, we have no doubt but that they will work out a system as well adapted to their wants as the French *marai-chers* (market gardeners) find this is to theirs.

A correspondent who has given considerable attention to this subject, has promised to communicate to us soon the result of his investigations; and we solicit others who may have experience in these matters to add their mite, for we regard the subject as a most important one, lying at the bottom of whatever improvement we hope to accomplish.

THE VAN ASSCHE PEAR.*

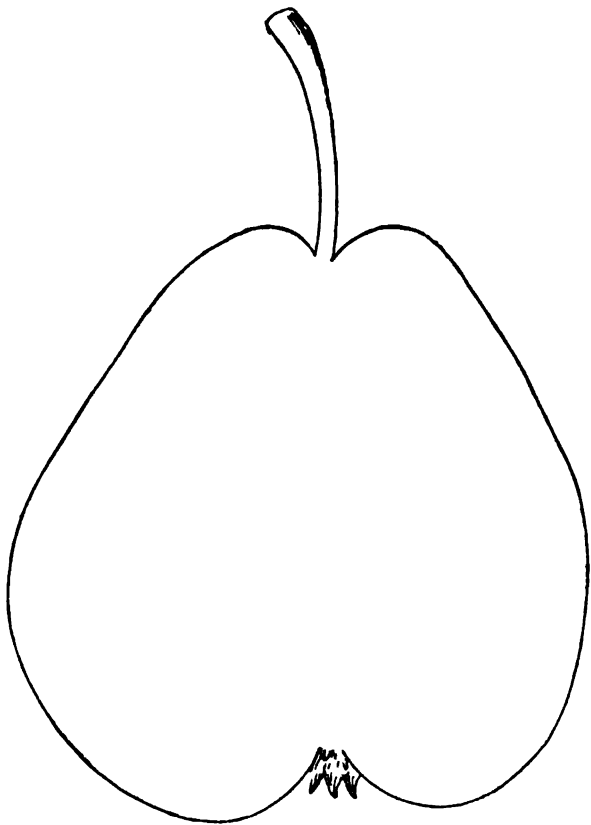
SYNONYMS: *Van Assene, Vanaessé, Van Asshe.*

WITHIN the past ten or fifteen years an immense number of foreign varieties of pears have been imported. Although much is said against the multiplication of sorts, and long catalogues, yet it can not be denied that these extensive importations and experiments have rendered important service to fruit culture in this country; and those who have conducted these experiments at the sacrifice of great cost and labor, and with such patience and perseverance, deserve the thanks of every man who wishes the advancement of this great branch of horticulture. We grant that many have proved to be nothing above mediocrity; many, too, have proved worthless; but a very considerable number of great excellence have been obtained, and have greatly augmented and enriched the resources of fruit growers. Look at the *Beurre d'Anjou*, *Belle Lucrative*, *Doyenne Boussock*, *Rostiezer*, *Doyenne d'Ete*, *Beurre Giffart*, and many others we might name. If only the three first named varieties had been received, they would in our opinion have been a very fair compensation for all that has been done. We remarked often last summer, during the period when the *Doyenne d'Ete* was in eating, that it alone was sufficient to recompense us for years of research and trial, and that it was really worth thousands of dollars to this country. We have not done. In fact we are but beginning to *realize*. In the great collections of WILDER, HOVEY, WALKER, CABOT, and other great cultivators, there are more *Beurre d'Anjous* and *Doyennes Boussocks*. Look at the list of those that "promise well," which Col. WILDER has given us, from his own experience, in the last and present numbers of the *Horticulturist*, and say whether it would be well to relax our efforts, or cry down such a commendable spirit of enterprize. No! no! Encourage it, rather; but, *let all who wish to tread on firm footing, cultivate only well proved sorts*, and the long catalogues will do them no harm. The wheat has already been sifted from the chaff to such an extent as to form a pretty reliable guide. We trust that neither our words nor our motives will be misunderstood. We are of those who believe we have not attained perfection; we go for *progress*.

The *Van Assche* pear, it will be seen by reference to the transactions of the "American Pomological Society," is classed with "New varieties which promise well." It was

* See Frontispiece.

put there, we think, at the suggestion of Mr. HOVEY or some gentleman from Boston, and we can say from our own experience that it well deserves the position assigned it. It is a very large and beautiful fruit, as our plate, which is a very faithful representation, shows. In quality it is "*very good*"; perhaps not as high flavored as the *Beurre d'Anjou*, but quite equal, as far as we have been able to judge, to the *Beurre Diel*, or *Flemish Beauty*. The tree is a vigorous, erect grower, and an abundant and early bearer, succeeding well on the quince. We have not yet fruited it on the pear. It is inserted in the catalogue of the transactions as "*Van Assene*," but we have followed the Belgian catalogues of VAN HOUTTE, BAVAY, and others, who ought to be correct, as it is one of BOUVIER's varieties. JAMIN, of Paris, has it "*Vanaesse*," and LE ROY's catalogue "*Van Asshe*." Our description, taken with the fruit before us, is as follows:



VAN ASSCHE PEAR.

Size—large; three inches in diameter and the same in height. Form—obovate, obtuse, or flattened at both ends, largest near the eye; slightly ribbed occasionally. Stalk—one and a half inches long, rather slender, and slightly sunk. Calyx—small, in a wide, smooth, and rather shallow basin. Skin—smooth and fair; light yellow in the shade, sprinkled with dark dots; light red on the sunny side, sprinkled with carmine dots. Flesh—white, buttery, and melting. Flavor—somewhat of the *White Doyenne*. Tree—vigorous, erect; shoots dark. Season—at Rochester, latter end of September and beginning of October.

DECIDUOUS LAWN TREES.

OUR correspondent, Col. JACQUES, whose communication appears on another page, asks: "What are the twelve best deciduous trees for lawns and streets, in our cold climates?" We thought it necessary to draw a line of distinction between lawn and street trees, and gave in our last number a brief sketch of the leading characters of what we regard as the best street trees. We now propose to offer, in answer to the question, a few remarks on *lawn* trees.

In landscape gardening, a lawn is a smoothly dressed and finished grass surface attached more immediately to the dwelling. In every style of gardening it is intended, in all its aspects and features, to represent the *beautiful*. A lawn—a smooth, soft, verdant, "velvet lawn," as it is expressively styled—is itself one of the most forcible illustrations of the *beautiful*; and its appropriate embellishments, whether they be trees, shrubs, plants, or objects of art, should all be characterized by symmetry, grace, and beauty. The rough and rugged, which in the landscape express the picturesque, do not belong to the lawn, unless under peculiar circumstances. This principle must not be lost sight of in selecting trees.

Again, lawns are of various dimensions, from the few square rods of the cottage garden to that of the country residence, embracing several acres. This is another important consideration; for *fitness* is a principle that lies at the very foundation of judicious planting, in all places and under every circumstance. A lofty, wide spreading, magnificent elm, would be an object of beauty on grounds of a corresponding amplitude; but place it on a limited lawn, and its beauty would be destroyed by the impression of unfitness which it would at first sight convey. *Variety*, too, is an object that should be aimed at in planting lawns, as far as may be consistent with good taste; and this compels us to consider the dimensions of trees.

There is also another consideration that should not be forgotten in selecting lawn trees, and especially those to be planted in more immediate contact with the dwelling, or in such a position as to strike the eye in connection with it. We shall only allude to this at present. It is very well understood that certain forms of trees make better contrasts, or are more in harmony with certain styles of architecture, than others. Thus, it is very generally acknowledged that Grecian and Italian houses, or houses in such styles as are characterized by horizontal lines, are relieved and exhibited to the best advantage by spiry-topped trees, like the Lombardy poplar, the larch, the balsam fir, Norway spruce, hemlock, &c.; while those of the Gothic character, with pointed roofs, abounding in vertical lines, small ornaments, lightness, &c., are best shown in contrast with trees of the round-headed, massive character, such as horse chestnuts, lindens, maples, oaks, elms, the tulip tree, &c. This is a consideration of some importance, too often entirely overlooked. The man who takes pains to adopt a particular style of architecture, for its intrinsic value or its appropriateness to locality, should be very careful in planting such trees around it, and in so arranging them as not to destroy, but rather to bring out fully and boldly, the particular expression of his style,

whatever it may be. Everywhere we look we see blunders committed on this very point, either through ignorance or negligence. But we shall return to it soon, and draw attention to it more in detail.

We spoke of the *American Weeping Elm*, *English Elm*, *Scotch* or *Wych Elm*, *Horse Chestnut*, *Sugar Maple*, *Silver Maple*, *Red Maple*, *Norway Maple*, *European* and *American Linden*, and *American White Ash*, as street trees, and all these possess sufficient symmetry of form and beauty of foliage or flowers to give them admission to the lawn; but they are all trees of large size, and require considerable space to enable them to make an ample development on all sides, as they should do on the lawn. They are therefore adapted only to extensive grounds. With trees of this class we may include the *American Chestnut*, some of the *Oaks*, the *Beech*, the *Tulip Tree*, the *Magnolia acuminata* or "cucumber tree."

Then among trees somewhat rare, or less generally planted, is the *Japan Sophora*,* (*Sophora Japonica*), a large, round-headed, or compact tree, with pinnate leaves and clusters of dull white or cream-colored papilionaceous flowers, bearing considerable resemblance to the *Robinia*, or locust tree. It is remarkable for the deep dark green of its foliage, and for retaining this in the warmest and driest seasons, and until quite late. In winter, too, it is as remarkable for the greenness of its bark as the *Cornus sanguinea* is for its brilliant red. It is strange that this tree has not attracted more attention. It may not prove quite hardy in all parts of the country, but it is so at Rochester, where the thermometer annually falls below zero 4 or 5 deg., and occasionally 10 deg., as last winter. It grows somewhat slowly at first, until well established, when it makes fair progress on good ground. It was first introduced into France, from Japan, in 1747. There is a weeping variety, which is one of the most remarkable and beautiful of all pendulous trees. The common sort is propagated by seeds, or by cuttings of the roots; and the weeping one is grafted on it, generally at six to ten feet from the ground.

The *Virgilia lutea*, or Yellow Wood, is a beautiful native tree, abounding in some parts of the western States, and especially Tennessee. It is of the same character in foliage and flowers as the *Sophora*, and indeed the elder MIEHAUX was of the opinion that it belonged to the same genus. It is successfully grafted on that tree, and this affords a strong proof of affinity. The leaves are pinnate, considerably larger than the *Robinia* or *Sophora*, and the flowers are white, produced in pendulous clusters. We hope to see it more extensively propagated and planted.

The *Salisburia adiantifolia*, or Ginko, or Maiden Hair tree, of Japan, is a singular and beautiful tree, well worthy of attention, and fit to occupy a prominent situation on a lawn. It has curious wedge-shaped, smooth, shining leaves, and makes a lofty and somewhat conical tree. It is dioecious, and very few specimens even in Europe have produced seeds; most of the plants sold and disseminated have been raised from cuttings. It is yet rare and scarce everywhere. Cuttings of the ripe wood are easily struck, and of the young wood with leaves on, placed under a bell glass, still easier. It may also be propagated from layers.

The *Kentucky Coffee Tree*, (*Gymnocladus canadensis*), is another large and hand-

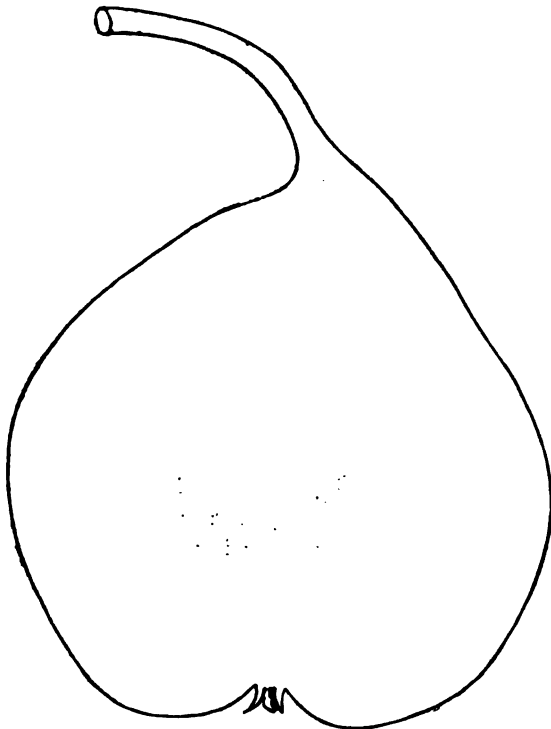
* See Frontispiece.

some indigenous tree, erect, regular and somewhat conical in its growth, with long pinnate foliage, approaching the ailantus in this character. Flowers white, in small spikes. Seeds produced in large pods, like those of the honey locust. The shoots are remarkably blunt, and have a singular appearance in winter. We remember having observed some good specimens in the streets in Newburgh a short time ago. This tree is easily propagated from seeds, which ripen well in all parts of the country. Of the smaller class of deciduous lawn trees we shall speak hereafter.

NEW PEARS THAT PROMISE WELL.*

BY HON. MARSHALL P. WILDER, BOSTON.

ROUSSELET DOUBLE, ESPEREN.—Form—globular or obovate, acute pyriform. Size



ROUSSELET DOUBLE, ESPEREN

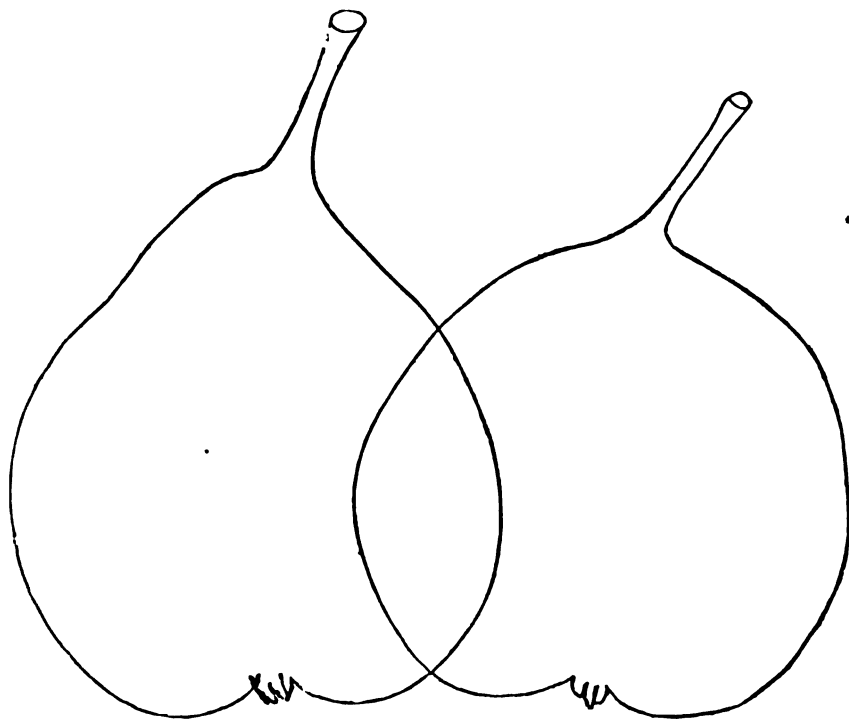
—above medium. Stem—long, curved, rather stout, fleshy at the base. Calyx—open; sunk in a deep, furrowed basin. Color—dull yellowish green, thickly covered with cinnamon russet. Flesh—white, melting, juicy. Flavor—vinous, sprightly, with pleasant aroma. Season—middle of October.—Promises to be classed as “very good.”

BEURRE SUPERFIN.—Size—medium to large. Form—obovate, acute pyriform. Calyx—closed, small, deeply sunk. Stem—rather short and stout, fleshy at the base, set without depression. Color—yellowish green, somewhat russeted, and occasionally with brownish red cheek. Flesh—very melting and juicy, with a rich, agreeable,

sub-acid flavor. Season—middle of October to 1st November. Class—“very good.” Promises to be a valuable acquisition.

BERGAMOTTE D' ESPEREN.—Size—medium. Form—roundish. Calyx—closed,

* Continued from January number.



BEURRE SUPERFIN.

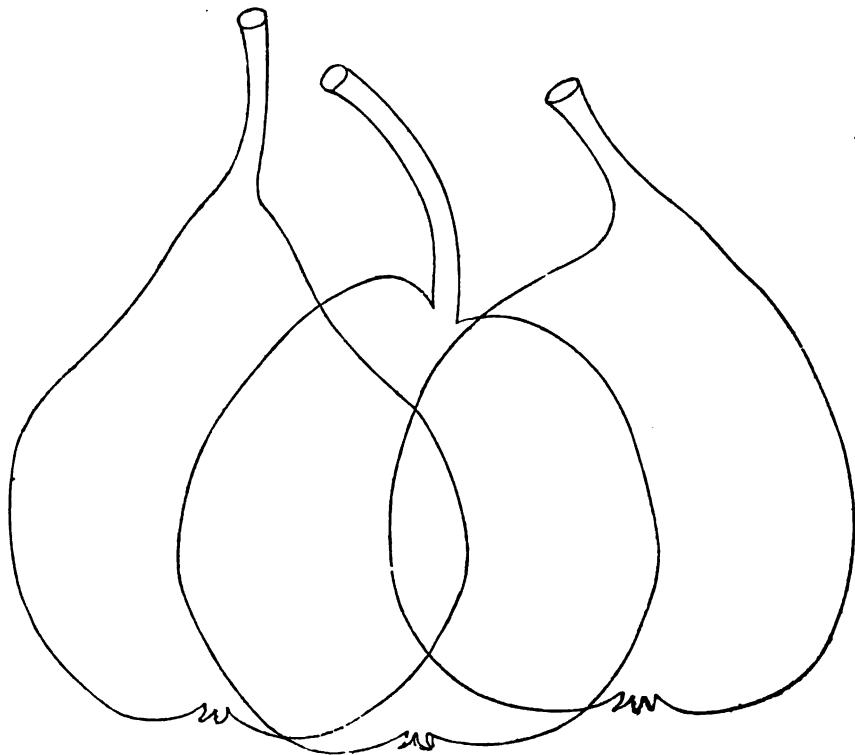
BERGAMOTTE D'ESPERIN.

sunk in a moderately deep, coarsely furrowed basin. Color—dull green, coarsely dotted, with some russet patches, and occasionally with brownish red cheek. Flesh—fine grained, buttery, melting, and juicy. Flavor—very sweet and rich. Excellent. Season—December to February. Class—“*very good*”—may prove “*best*.” Very productive. Bears in clusters.

ROSABIRNE.—Size—medium. Form—obovate, acute pyriform, angular; surface uneven and knobby. Stem—about one inch long, fleshy at the base. Color—dull greenish yellow, almost entirely overspread with russet. Flesh—white, melting, and juicy, with a delicious, brisk, sub-acid flavor. Season—middle of October to 1st of November. Class—“*very good*”—promises to be classed as one of the “*best*.”

BARONNE DE MELLO.—Size—medium. Form—obovate, acute pyriform. Stem—short, stout, fleshy at the base. Color—yellowish russet. Flesh—greenish white, melting and juicy, with an agreeable, tolerably rich, sub-acid flavor. Season—October 15th. Will probably class as “*very good*.” A strong grower on the quince, producing abundantly.

BERGAMOTTE GAUDRY.—Size—medium. Form—roundish. Stem—long. Color—yellowish green, covered with coarse russet dots. Flesh—white, tender, very juicy. Flavor—mild, pleasant sub-acid. Season—middle of November. Class—“*good*”—



ROSABIENNE.

BERGAMOTTE GAUDRY.

BARONNE DE MELLO.

may prove "*very good*." Exceedingly productive either on the pear or quince stock. Fruit borne in clusters.

The foregoing article has been already extended beyond my intention. I will therefore close it by referring briefly to some other varieties of recent introduction which give promise of being worthy of cultivation. Among these may be named —

BEURRE NAVEZ. — A pear of full medium size, ripening in October.

SUPREME DE QUIMPER — A handsome variety. At maturity about middle of Aug.

VAN DE WEYER-BATES. — Rather below medium size. October 1st to 15th. Very productive.

JOSEPHINE DE MALINES. — Medium size. A rich, delicious sort. Ripens from December to February. Keeps well.

BEURRE BENNETT. — Below medium size. November to December. Bears in clusters, abundantly.

CATINKA. — Medium size. October to November.

COMTESSE D'ALOST. — October to November. Resembling in form the *Figue*.

GEDEON PARIDANT. — Resembles in form and flavor *Gansel's Bergamot*. Ripe in October. PRINCESS CHARLOTTE, PAUL THIELENS, MARY ANNE DE NANCY, etc.

ON THE EXCRETION OF PLANTS.

BY THOMAS MEEHAN, GARDENER TO CALEB COPE, PHILADELPHIA.

EVERY person connected with the cultivation of the soil is aware that soils wear out, or become exhausted, by being constantly cropped with one kind of plant. It has been supposed by many, that the soil under such circumstances becomes impoverished by the plants. Others, again, conclude that it is poisoned by excrements thrown off by the roots. I propose to examine the arguments advanced by the latter, not with the object of showing that the soil may not be deteriorated by the excrements alluded to, but that they have hitherto failed to prove even the probability of the hypothesis.

It seems to be admitted that plants excrete indigestible matter from their roots. "The roots not only absorb fluid from the soil, but they return a portion of their peculiar secretions back again into it, as has been found by BRUGMANS, who ascertained that some plants exude an acid fluid from their spongioles; and also by Mr. MACARE, who has proved that to excrete superabundant matter from the roots, is a general property of the vegetable kingdom."—(*Lindley, In. Bot., Book, II, Chap. 2.*) "If we place a growing bulb in a vessel of water, but do not change the water, in a few days a slimy substance appears in the water, evidently an excretion from the roots."—(*Horticulturist, Vol. VII, p. 507.*) "If you place a succory in water, it will be found that the roots will by degrees render the water bitter, as if opium had been mixed with it; a spurge will render it acrid; and a leguminous plant mucilaginous. And if you poison one half of the roots of any plant, the other half will throw the poison off again from the system."—(*Theory of Horticulture, par. 40.*) "An apple orchard will not immediately succeed upon the site of an old orchard of the same kind of fruit. No amount of manuring will enable it to succeed. Dahlias do not 'like' the soil in which dahlias grew last year."—(*Ibid., p. 284.*)

All the extracts, except the last, show that plants do excrete from the roots certain substances. The last extract is one of many observations which have been recorded to show that successive cropping *deteriorates* soil. That there is some change in it, is undoubted; but that it is caused by their excrements, is *assumed*. We know that each individual plant absorbs from the soil peculiar elements; or, at least, peculiar proportions of various elements. This has been proved by chemical analysis. Have the excrements of any given plant been subjected to the same ordeal, and the nature of the assumed poison been detected? Would it prove to be arsenic, opium, or any of the metallic or alkaline poisons that are known to be as destructive to vegetable as to animal life? Whether with the idea of showing the injurious effects of excrementitious matter or not, such an analysis would be highly interesting to those who cultivate the soil. The idea that it injures the soil, seems to originate from the apparent impossibility of a plant taking up again what it has once thrown off. But has it been proved that the matter thus thrown off must necessarily remain unaltered in the soil, and may not be immediately changed, by conjunction or chemical affinity with

other substances, to matter useful to the growth and existence of the plant? It has been inferred by a correspondent of the *Horticulturist*, in the page quoted above, that many of the deaths which are supposed to result from "sour soil" and "overwatering," are rather caused by an accumulation of excrementitious discharges. Has there been anything discovered by which to prove that this "sourness" is not what most gardeners take it to be—the result of an acid? I, and no doubt the majority of my practical brethren, have frequently observed that the greater the amount of organic matter in soil, the easier does it "sour." We are particularly anxious to avoid the use of leaf mold in any other state than "well-rotted," on that account. An abundance of water is favorable to the decomposition of organic matter; and "soils contain a peculiar acid analogous to humic acid, produced during the decay of vegetable matter, which is hurtful to the growth of plants."—(*Solly. Rur. Chem., par. 313.*) LINDLEY himself, one of the advocates of the excrementitious doctrine, suggests that "the subject has hitherto been so little investigated, that it is not safe, perhaps, to take it as the basis of a theory."—(*Theory of Horticulture.*) And since his time, HENFREY, the most searching of modern physiologists, considers the theory as "entirely without foundation."—(*Henfrey's Outlines of Veg. Phys.* I quote from memory.)

Although there seems, then, to be no evidence that the excrements of plants have the injurious effects on the soil they are charged with, the discussion of the subject has been productive of good. It has caused attention to be called to the nature of impoverished soils, and its causes, which must in the end produce knowledge which will be of undoubted interest to the cultivator of the soil.

[The question regarding the excretions of plants stands at the present moment as unsettled and debateable as ever. DUHAMEL, we believe, was the first to call attention to it, being led to suspect excretions on account of the earth adhering to the young roots, or spongioles of plants. BRUGMANS, DECANDOLLE, and others, took it up and collected a large number of facts (familiar to readers on this subject) bearing upon the point and furnishing a sort of circumstantial evidence in favor of such a theory. MACAIRE PRINSEP, at the suggestion of DECANDOLLE, made a series of experiments to test it, by growing a great variety of plants in phials of pure water; and the results were such as gave additional strength to the excretive doctrine, at the time. But practical men were not satisfied with experiments conducted upon plants in such unnatural conditions, and other experiments of a more reliable nature, subsequently conducted by some German phytologists, produced entirely opposite results. The theory, therefore, has never been fully established, although we believe that a majority of those who have given the subject attention regard it with a greater or less degree of favor. For our own part, we do not wholly discard the doctrine. We almost daily meet with cases in practice that persuade us that at least it is not unreasonable. In turning up the soil in which certain plants have grown—the cabbage and turnip tribe, for instance—we find peculiar odors escape. So in potting or shifting house-plants, we find that different plants impregnate with different odors the soil in which they have grown. This may or may not be due to the process of excretion.

We do not, however, believe that this process is such, in any case, as to unfit the soil to reproduce the plants which grew in it. The fact, with which we all are familiar, of the failure of successive crops of any given tree or plant in the same soil, is unquestionably due, in the main, to an exhaustion of the soil, or its loss of the elements essential to the growth and perfection of such trees or plants. Our American agriculture exhibits thousands of instances where, owing to the extraordinary fertility of the land, twenty successive crops of corn have been grown in the greatest perfection, without any renewal of the soil by deep tillage or the addition of manures. In other soils two such crops could scarcely be taken in succession. So in regard to other crops. In the case of nursery trees, we have known instances where a single crop of apple trees of four or five years growth so exhausted the soil, that a succeeding one of the same trees was a perfect failure, notwithstanding the most liberal culture.

Rotation of crops is an established principle in field, garden, and nursery culture; and this, not because plants excrete matters unfavorable to their growth, or favorable to the growth of a different class of plants; but chiefly, as we have already said, because they exhaust the soil of certain elements which are necessary and indispensable to their particular structure, composition, and mode of growth. Excretion to some extent is, however, possible and even probable.

The question is full of interest, not only in a scientific point of view, but as having a direct bearing upon one of the most important branches of culture — *the nutrition of plants.*—ED.]

TREATMENT OF WOODS.

BY WM. H. SCOTT, ADRIAN, MICH.

No branch of agricultural industry is of greater importance than the forest in all its appliances. In most of the States the question now is not how the woodlands shall be most speedily cleared of the trees, but by what management shall the necessary calls for wood in its different uses be most economically answered, with the smallest inroad upon the standing timber? Even in our new States a good "wood lot" is often considered the most valuable on the farm.

Two questions are involved in the preservation of these forests: How may the uses of building material and fuel be economized? How far may the products of the forest be increased, and improved in quality, by proper management?

With the greatly improved modes of generating heat for domestic and manufacturing uses, not more than half the amount of fuel is required now that was consumed ten years ago. Iron and glass are displacing wood for the frames and finishings of buildings, water craft, carriages, furniture, and many other branches of art. Iron and glass are fast gaining ground where strength is more needed than bulk, and where durability is an important consideration.

I do not now wish to discuss the economies of wood after it has been taken from the forest. How much and what quality of wood may be taken from woodland, con-

sistent with the least deterioration of the permanent value of the forest, is a question that more immediately concerns the land owner. The oak is the most valuable of all our woods. It is the most generally diffused, and it is put to the greatest number of good uses. It is well known that the most valuable timber is that which has attained its growth with most light and air. The wagon-maker takes care to combine toughness and durability, by selecting his wood from trees of "second growth," or from trees of first growth that from infancy have stood alone or far apart. Acting on this hint, we would cull out first such of the oaks as are unsound, giving those that are left more light and air. It is a fact in vegetable physiology, that motion facilitates circulation, and that young trees confined to stakes do not form their bodies so rapidly as when left to the moving influences of the breeze. The thinning should be carefully effected too; for the sudden exposure of the body of a tree to the light, after it has been shielded for centuries from the rays of the sun, is frequently fatal to it. The growth of a tree that has always been closely hemmed in, and guarded by its fellows, has a form so different from one of the same species that has sprung up and come to maturity in the open ground, that the identity would scarcely be recognized. Thus, the black walnut in the forest is a tall, naked shaft, with often but a few short branches at its top; while in the open field it grows low, round, and spreading. I have often recommended the whitewood for the avenue, or as a very fit tree for private grounds, and have almost as often been asked if that tall, naked tree, out of which so much lumber is made, could be beautiful. Here let me say that the very general ignorance which exists of the difference in the beauty of pent up forest trees and those that have had full exposure, is the great reason why ornamental trees for transplanting are so seldom chosen from many of the more common forest varieties. How often does the woodman's axe itch for contact with the tall, naked column of the white ash, whose tempting softness is destined to be unfelt until he shall have disposed of some harder but less valuable tree. As a lawn tree, that white ash becomes short and round, close and symmetrical.

The experiments of hundreds, in attempts to develop the sylvan beauties of wildwood, have failed from sudden and indiscriminate thinning. I have seen the fruits of it on my own ground. A narrow belt of forest, composed of oak, linden, hickory, and elm, was left a few years ago on the front of a sloping field. Noble old oaks some of them were while standing in the thick forest. I have hoped that exposure to the light would force them to throw out branches from their naked bodies, and that some of these days a pretty grove would be the result, as many more sound trees of a younger growth were left as body guards to shield their stems. These younger have done their duty well; but the old ones struggle on from year to year, and refuse to be comforted by the youthful family around them. Some of them have thrown out a few weakly branches, but as many more look as if beginning to decay. I shall, after all, look to the second growth for my permanent and most beautiful shades. The difficulty in my case was that the wood was too suddenly thinned. Two-thirds of the large trees had been cut out of the belt nearly at once, judging from the appearance of the stumps, and *all* the trees on either side.

Owners of wood lots do not attach sufficient importance to their nut-bearing trees. It will not be very many years before the hickory, black walnut, and chestnut, will have become so scarce as to possess a value, for the fruit they might produce, quite exceeding that of most orchard trees. But a small portion of the hickory trees in forests where this is the prevailing tree, bear well, if at all. The good bearers should be saved and cherished. There is so much difference, too, in the quality of the nuts — nearly as much as in the fruit of a seedling apple orchard — that great care should be taken in selecting the trees to be spared the axe. Some claim to be able to judge of the character of the nut by the number of leaflets in a leaf. I do not know how far this test may be relied on.

In forest labor there is quite too little attention paid to the fact that some trees are impatient of removal, and that such should be cherished on their natal soil. The hickory, for instance, is very difficult to transplant. Indeed, I do not recollect ever to have seen one, of the common size for street planting, live long after removal. We should act upon the hint, and encourage it to give us the greatest possible beauty in the place where it germinated. Few of our western farmers realize that they have been guilty of any great barbarity, when they have "cleared" their last field without having left a hickory upon the farm. With this tree, utility and beauty go so hand in hand, that such wanton destruction is quite inexcusable. For beauty and thrift, there are few round-headed trees equalling the hickory.

Thorough draining will much improve a forest, not only in the increased growth of the trees, but in the greater comfort of getting about in it. All, or nearly all woods are closer and firmer on a dry than on a wet soil. Often the vegetable matter that forest ditches afford would pay very well for the trouble of cutting them; and it will generally be found that these drains will effect quite as favorable a change in the forest crop as in the field crop, though their influence would not be perceived so immediately.

It is becoming an object in the older States to *make* forests for timber. On sandy soils, and such as compose the western prairies, the locust grows so rapidly that it soon arrives at a size profitable for many uses. On a moderately rich, sandy soil, the yellow or seed locust, if not sown too thick, is large enough at eight years old to make good fence posts, and would do very well for the rails of a "post and rail" fence. The sprouting propensity of this tree precludes all necessity of replanting. The character of the locust for durability is such that, if possible to get, it would be very generally used for railroad ties. A prairie or New England farmer could hardly make a surer provision for his children, than to make a locust plantation of a portion of the land he holds in reserve for them.

Now, Mr. Editor, these thoughts are intended more as suggestive of a great deal that should be said on forest culture, than for any intrinsic value of their own; and I hope they may be the means of calling out more familiar pens.

[Our correspondent truly says that "no branch of agricultural industry is of greater importance than forest management." We heartily thank him for bringing forward



SOPHORA JAPONICA. The Japanese Sophora

20 feet high, 9 inches in diameter.



a stick could be thrust to ascertain how much water had accumulated; and rarely the box is turned on its side to discharge any surplus. This box externally is covered with strips of oak bark; a longer piece being used in the middle of the ends and sides, to represent handles. This is all very simple and easy in practice, and once obtained will last for a long series of years, being moved into a shady spot in summer, and brought in-doors at early frost.

Two or three winters nursing will bring the plant to the size we have mentioned; and if a little care is exercised to train it on one side of the trellis, it can be at any time cut from its stringa, and a larger trellis supplied, as its size increases. The supports may be of oak, cut thin, interspersed with bamboo cross-pieces. In time it may require shifting to a larger case; and will then, if you do not choose to trim it to suit your window or corner, form a large screen in a drawing-room, sufficiently dense to divide conversation parties from each other; or several of them placed around the walls of a room used for dancing, &c., would form elegant ornaments. They would always impart a warm and summerish hue, and should thus be trained for every conservatory, as a back-ground or terminating view. No person of taste ever sees our friend's fine specimen, without expressing a wish to possess just such another.

The soil suited to this plant is a mixture of good garden mold and thoroughly decayed leaves. Properly planted in this, the rapidity of the growth of the Giant Ivy will be very satisfactory, whether in a parlor box, or against a wall or tree. We should, however, remark that it will be best to take a well rooted plant from a pot; the ivy requiring a year at least to obtain a firm foundation in the earth, after which there is scarcely any limit to its progress.

The Giant Ivy has not been generally introduced in America; but every one who has *coached* through Ireland will retain vivid recollections of its effects on the eye. In our opinion it is one of the great points in the scenery, and helps materially to give that beautiful island its designation of "Green isle of the ocean." We should be glad to see it much more generally introduced around our mansions. Even in cities a single ivy plant in a small garden, running over and clinging to an old tree or the walls, is a perpetual enjoyment. Where no old tree exists, you can easily bring to the spot most seen from the window a stump ten or twenty feet high, and plant it for the purpose; or employ a trellis, taking care in the latter case to tie up the new growth regularly. The ivy succeeds best in the open air when planted on the north or northeast side of what it is intended to cover. If you have a coppice or a piece of woods accessible to your country mansion, plant a few roots near the trees every spring. They will sometimes run among the leaves on the ground, making a superb appearance, and ever and anon will catch hold of the bark and run "high in air," when you can but remark with admiration the different size and appearance of the beautiful foliage; that on the ground will be smaller and of a different hue from that which has got up into, and rejoices in, more light and air. Sometimes, and in some seasons of drouth and extreme cold, you may be unsuccessful; and hence the hint is given to persevere in successive spring plantings. You may as well recollect, too, that ivy persists in not clinging to plastered walls. In some cases it may be coaxed

to do so by nailing to the wall, directly under the youngest tendrils, a strip of an old cloth coat. To this the ivy attaches itself, and having a *firm hold*, it will sometimes continue to cling where otherwise it would entirely refuse its courted efforts.

To all who are not too far north to employ this beautiful vine—the most beautiful we have, when its endurance and age, with its exquisite green at all seasons, in doors or out, is considered—we say plant the Giant or Irish Ivy; and if too far north for winter exposure, treat it to a box, as we have recommended, and winter it in your living room.

THE CURCULIO.

BY JAMES MATHEWS, COSHOCTON, OHIO.

I KNOW of no one subject connected with fruit culture of more importance to us western people than this. There is no malady or cause existing here that would prevent our having a full crop of that delicious fruit the plum almost every year, were it not for this pestiferous insect. Is it possible that we are to have no remedy? Must we fell all our plum, apricot, and nectarine trees, to prevent the increase of this little wretch to such an extent that he will destroy our other fruits, which is now the case to a considerable degree in many locations? I hope this great calamity may, through the ingenuity and skill of some one, be averted by the timely discovery of a remedy that will cost less than the fruit is worth. The shaking of the trees upon sheets, the only sure means of saving the crop yet discovered, with me takes an amount of labor and time fully equal to the value of the crop; so that its discovery may, as far as my experience goes, be considered of no value or utility to community. To save the majority of the fruit on half a dozen trees in my garden, by this means, requires the labor of a hand one hour and a half every morning and evening for a period of six weeks. At ten hours for a day's work, this would amount to over twelve days; (recollect there are to be no Sundays during this time; if so, your crop is gone;) which, at 75 cents a day, would amount to \$9; saying nothing about boarding a hand for two weeks, which would be at least \$3 more. The trees upon which I made my experiments will not average over one bushel of fruit each. It will be seen, then, that by this process of preserving the fruit, it would cost about \$2 per bushel, which I think is quite as much as it would bring in our market, at least after deducting labor of picking and carrying.

I have tried many of the published experiments beside this, such as chickens, pigs, lime, salt, &c., &c., all of which have entirely failed. Connected, however, with an application of a solution of lime and sulphur to the tops, made with a syringe, during the past season, I made an accidental discovery which I think worthy of note, and which may lead to some beneficial results. I had read communications from several persons who had been successful with the sulphur and lime application. I determined last spring to try it; and as soon as the plums were fairly shaped, and before the curculio commenced his destruction, I prepared the solution, went to work vigorously,

and gave four applications within ten days, on one tree of *Gen. Hand*, one *White Prune*, one *Caledonian*, one *Knight's Green Drying*, one *Royal Hative*, and one *Green Gage*. I covered the tops, leaves and fruit, so completely with the mixture, that at a little distance the trees looked as though they were in one perfect sheet of bloom. For two years previously I had not had a single fruit to ripen on any of these trees. About five days after the first application, I discovered the work of the insect on every tree, all about equally. The depredations increased constantly, although we applied the mixture in greater quantities. After the fourth application I discontinued it, believing that it was doing no good. At this juncture I set my gardener to work at spading up a part of my garden, with directions to spade it deeply and turn the top earth completely under. It happened that he commenced in that part of my lot where one of the plum trees stood, (the *Green Gage*.) The ground under it, and in all that part of the lot, was deeply spaded and well turned under. There was no spading done under or about the others. After three or four days I discovered that the depredators had discontinued their work upon this tree, while on all the others they appeared, from the havoc they made, to work with a double fury, as though maddened at the attempt to foil them by covering their victims with lime and sulphur. On the five trees there was not a single fruit left to ripen. On the *Green Gage* not a plum was incised after the spading, that I could discover. From it was gathered about one bushel of perfect fruit.

That this fruit was saved by turning up the subsoil, or turning under the top soil, I have no doubt; but as to the philosophy of the thing, or the reason of the result produced, I am at a loss. It must have been produced, however, by one of two causes; and I will remark here, by way of introduction to one of them, that by syringing the trees a large quantity of the lime and sulphur solution fell upon the ground, so as to produce an incrustation upon the surface to the full extent of the circumference of the branches of the tree. One is, that the composition, or incrustation on the surface, by the turning under was brought into immediate contact with the spongioles, or feeders of the roots, and thence taken to the fruit; that, when dissolved by the sap of the tree and acids of the fruit, its effects were to produce a flavor or taste loathsome* to the depredator, and thereby prevented his further annoyance. The other is, that during the season in which the curculio inflicts his mischief, he fixes his habitation permanently under the tree, near the surface of the ground, where he remains during his time of rest, and from which he ascends to the top of the tree, either by his legs or wings, at his proper season for labor; and that by the spading he was turned under the ground so deeply that he could not again make his way to the surface.

I shall continue my experiments next season. I shall try the spading alone, and the turning under and sulphur and lime mixture on the surface of the ground in conjunction.

* We very much doubt this, as we have found the most loathsome applications to the fruit of no avail in repelling the insect. We are very happy to record such instances of close and careful observation, and trust that experiments will be continued; but we must say that we have very little confidence in any experiments of such a limited nature, because almost every year we see individual trees escape, as in the case of the *Green Gage* alluded to, from some cause or other unseen.—Ed.

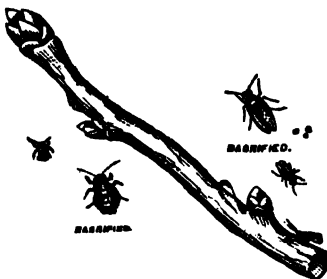
One inquiry, and I will close for the present. What has become of the remedy for the curculio discovered by WM. QUANT, gardener to W. C. LANGLEY, Esq., 3d Avenue, Long Island? (See *Horticulturist*, Vol. 6, pp. 583, 584.) He asserted his "conviction that his composition was a radical exterminator;" that he "would keep its nature private until practical men and others [meaning, I suppose, the rest of mankind,] interested were satisfied, after which his receipt should be open to the world." I have waited patiently for its publicity. Should it prove to be what Mr. QUANT confidently believed it would, I know of no discovery recently made, connected with pomology, which would be of equal value to this, in many portions of our country. I should be glad to hear what Mr. QUANT's success has been during the past season, and whether he has not given sufficient satisfaction of the utility of his application, to justify him in making it public.

LEAF FROM MY JOURNAL.

Psylla Pyri, or Pear *Psylla*.

I HAVE found this minute and destructive insect on my pear trees as late as the middle of December, the imperfect insect or pupa still busily employed in sucking the sap by means of its rostrum or piercer, (which is situated under the thorax,) and at the same time discharging its excrement, which is the honey-dew, or sweet glutinous substance so plentifully adhering to and disfiguring the branches at present. Other insects—the aphids, for example—have also the power of producing the honey-dew; but of this we will speak hereafter. Ants are said to be very fond of it, and this may account for the multitudes of these restless and proverbially industrious insects I have often observed running up and down a feeble and diseased pear tree this season. The pupa of the *Psylla pyri* at this time of the year appears to prefer the side of a branch, just above a bud, as its permanent place of residence, as it perhaps finds the sap more abundant there. The head is generally hidden under the bud, leaving merely the black abdomen and wing-cases visible, although they sometimes quit this quiet

shelter and promenade on the branch, probably in search of better quarters. When taken from the tree, they crawl very slowly, and their general appearance puts one forcibly in mind of that species of insect which is such a terror to all cleanly housewives, and which generally performs its annual migrations in the city of New York "on or about" the first of May. The pupa of the *Psylla pyri* is very minute, and of a flat shape. The wing-cases and abdomen now are black, but I must here remark that the colors are said to vary in spring and



PSYLLA PYRI.

summer. The legs are six in number, and of a yellowish brown color, growing darker or nearly black toward the tarsi or feet, which appear to terminate abruptly and to

have no joints. The eyes are reddish and prominent, like those of the locust, (*Cicada*.) The head is black, with a yellowish red longitudinal stripe. Thorax same, yellowish red, spotted with black. Four first segments of abdomen black, ringed with yellowish red. Extremity or tail broad, black, and fringed with hair. I likewise discovered on the same branch a cluster of very minute, reddish eggs, placed on and underneath a bud, and which probably belong to the *Psylla*. The perfect insect has four wings, which, when folded together, form an angle like the roof of a house. These wings are transparent, veined with black, and with a black spot or mark on the lower side of the upper wings. The under wings are partly edged with black, and have only one black rib near the center. The head (which is divided in the center, and has two projections in front,) and thorax are dark brown, striped and spotted with dirty yellow. Eyes prominent, and reddish. Abdomen black, banded with yellow. Legs yellowish. Antennæ long, and apparently jointed. Tail divided, black, and turned up. The perfect fly generally walks with the greatest gravity and decorum; but on presenting the finger, and when you least expect it, he disappears with a spring like a grasshopper, using his wings at the same time; and it was some little time before I could capture a perfect specimen to sketch from. They likewise appear to be of a very sociable disposition, as groups of twelve or more may be found on the branches, huddled together like sheep, and each one apparently on the best possible terms with his neighbor. After my thermometer had been to 7 deg. Fahr., I found several perfect insects hidden under the rough bark of a pear tree, and which, on being placed in my hand, became "thawed out" and quite lively. The greatest wonder is how the larvæ elaborate honey-dew in such great quantities, as I have seen a drop exuding from the body of one (perhaps the gormandizer of his race) six or eight times as large as the insect itself. Indeed, it was only from the appearance of this dew that I was at first induced to examine a branch. No doubt this constant drainage of sap must impair the vital energy of the tree, and in time would so much weaken it as to impair its fruitfulness, if not altogether kill it.

The insect being found, the next question is how to get rid of it.* Whale oil soap with a little flour of sulphur is excellent for most insects, and I think would answer the purpose here. I have often seen the little chickadee, or black-cap titmouse, clinging to my pear trees, head up or down as the case might be, peering inquisitively into such nooks and corners as the *Psylla* pupæ frequent, and then making a most suspicious dart with his short and sharp bill. I have no doubt that he often swallows a dozen or so as a relish, as we eat oysters, although it would require a great many *Psyllæ* to make even a tolerable lunch for a chickadee.

In regard to birds, with all due deference be it spoken, I am of a very different opinion to the anti-ornithological correspondent of the *Horticulturist*, and will merely mention one fact among the many I have experienced, in corroboration of my opinion. A king bird, or tyrant fly-catcher, having made rather too free with the lives and

* We succeed quite well in destroying the common green and black aphids on trees, with a solution of tobacco. We put some tobacco stems into a barrel—say half fill it—and then fill up with water. After a few days soaking it is fit for use. We keep this very effectual remedy at hand during the whole growing season. It would be very well to add a little whale oil soap. We think this will destroy the *Psylla*, especially if pretty strong.—Ed.

liberties of my bees, (or, as some say, only drones, though this fact has never been proved to my satisfaction,) I shot an unfortunate little phoebe bird, as it was sitting amidst the foliage of the tree the king bird was accustomed to frequent. So much for keeping bad company, I moralized, and immediately proceeded to dissect it, in order to see if I had not done right in shooting it, also hoping to find one bee at least in its stomach, as a sort of salvo to my conscience for committing this foul murder, when to my astonishment and regret I found it completely full of the *Galereuca vittata*, or striped bug, so injurious in this country to the young cucumber and melon plants. I think I need not add that I never shot another, but now encourage all the insectivorous birds to build their nests on my place, by every means in my power; and I really believe that I have already received ample repayment for any little protection I am able to afford them, by the sensible diminution of insects in my garden, not to mention the gratification I receive from the sweet songs of the blue bird, wren, garden warbler, &c., who serve to enliven many a long summer's day from sunrise to sunset. G.—*Fishkill, N. Y.*

CULTURE OF FOREIGN GRAPES IN COLD VINERIES.*

BY H. L. SUYDAM, GENEVA.

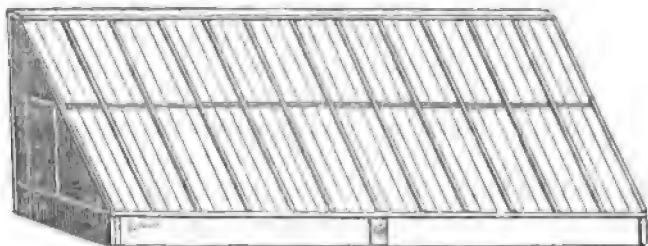
[We commend the following article to the special attention of amateurs, as the plain, straight forward statement of an amateur cultivator who has been eminently successful in this branch of culture. We know Mr. SUYDAM well, and can vouch for the honesty and accuracy of all he has said in regard to his management or its results. It will be remembered that at our State shows he has carried off the highest prizes even from professional growers. His grapes have always been remarkably well colored, excelling more particularly in this than any other point of merit. The material of the vine border accounts for this in a great measure. Instead of *dead carcasses, offal, &c.*, Mr. SUYDAM has laid a thorough foundation of *bones, charcoal, shells, cinders, and well decomposed manure*; and these are the very materials to yield a healthy, firm, well ripened wood, and sound, well colored, and finely flavored grapes. We hope his success will, as he says, "induce others to try."—ED.]

IN compliance with the wishes of very many inquirers, I undertake to give to the public, through your columns, the plan of my vinery, and my mode of cultivating the foreign grape under glass. I will enter upon my duty, then, at once, by saying that I claim nothing new or original in my mode; I have taken some from one and some from another of the very many writers on the grape; and as I have had very good success thus far, I shall feel it a great pleasure if I may but make this statement so simple as to induce others to try the same for themselves.

My vinery has a free open exposure to the south, being what is called a "lean-to"

* From the Geneva Courier.

house, built against the south side of my barn.* It is thirty feet long, twelve feet high on the back wall and one foot in front, an eight-inch timber resting on three brick piers in front for the rafters to rest upon, and fourteen feet wide. The ends are of 1½-inch stuff matched, put together tight and double, and filled in with tan bark, to keep the house as warm as



A LEAN-TO COLD VINERY. SCALE TEN FEET TO AN INCH.

possible. The door may be in either end, there being no fire used. The sashes are in two lengths, the upper ones to slide easily over the bottom ones, so that the house may be easily aired at any time, and made according to DOWNING. (*Fruits and Fruit Trees of America*, p. 226.)

I have a hogshhead sunk in one corner of the house, to catch the water from my barn, with a small force pump and hose attached, with which I can sprinkle the house thoroughly in a very short time; for it is of the utmost importance to keep the house moist during the growing season.

The border extends over the whole of the inside of the house, and runs twelve feet outside in front; being thirty feet by twenty-six, and two feet eight inches deep. The dirt is first removed to the depth of two feet eight inches; then filled up eight inches with broken bricks, stones, and lime rubbish, so as to form a thorough drain, (for the roots of the vine delight in a warm, rich, open soil, not too moist;) the soil is then filled in two feet eight inches, to allow for settling.

In the border I am very particular. I have in my border fifty bushels of whole bones, in which there are fifty beeve and sheep skulls; fifty bushels of pulverized charcoal; twenty-five bushels oyster shells; a quantity of leather scrapings; twenty-five bushels of coal and leached ashes; twelve bushels of blacksmith cinders and iron filings; twelve loads of well decomposed manure; and the rest is made up of street scrapings, garden soil, yellow loam, and sod from an old pasture; no dead carcasses being used. The whole is well mixed together, and filled in on the last of March; and the vines are then planted on the *inside* of the house, eight inches from the wall, one under each rafter, which will make the vines about three feet apart. The object is to make the border as loose, open, and rich as possible. Avoid all walking on the border after the vines are planted.

I have ten vines in front and eight on the back wall, of the following varieties, procured of PARSONS & Co., Flushing, L. I.: four *White Muscat of Alexandria*, one *Royal Muscadine*, one *Palestine*, one *Gray Tokay*, one *Black Prince*, one *Black St.*

* We add a sketch of "a lean-to vinery" of the proportions and style described by Mr. SUTNAM, in order to make the subject better understood.—Ed.

Peters, one Zinfindal, one Red Frontignan, one Wilmot's New Black Hamburg, six Black Hamburg.

I plant the vines about the first of April, taking care to spread out the roots, that they may have a free start and not get entangled; rub off all the buds except the strongest one at the bottom. Water the vines freely, if the weather is warm, and keep up a humid atmosphere all the time. Never allow the vines to receive a check after having once started. If it should get too warm, open the house a little at noon, but never let the house be open after four o'clock. If you only leave one bud on the vine, you must take great care of it, as it will rub off very easy, and then your vine is gone. Water with soap suds every Monday—one pailful to a root—and on Friday with guano. Put two quarts of guano in a barrel of water, stir well, and apply at once.

About the 20th of April the buds will begin to push. Let the temperature be pretty high; it will do no harm. I often find my house as warm as 100°, 110°, and 120°, Fahrenheit; but 80° or 90°, with plenty of moisture, is the best. As the buds begin to push out, raise them to a wire trellis about twelve inches from the glass. If any of the other eyes push, rub them off. Give plenty of air in the middle of the day, sprinkle frequently, and keep up a moist atmosphere.

September 1st. Discontinue watering except with the suds. Pinch off the shoot, which by this time will be twelve or thirteen feet long.

December 15th. Cut off the vine about six feet from the bottom, wash it with mild soap suds, wrap with straw, and lay it down in front of the house. Sprinkle some rat destroyer about, cover the border inside and out with ten or twelve inches of manure to keep the frost from the roots, and the work is done for the season, except to examine the glass to see if it leaks, and open occasionally when the sun is too hot, and to see that the mice do not trouble the vines.

SECOND YEAR.—Open the house as the season advances, so as to air, and that the buds may not burst too soon. About the first of April, if the season is favorable, uncover the vines, and let them lie down until all the eyes have pushed an inch; raise them by degrees, that they may all swell alike; then fix them to the vine trellis. From the time the house is opened, sprinkle every day, except on damp, cold days, the same as last year.

May 1st. The eyes have now pushed a foot or more. They are now called spurs. Many of them will show fruit. Pinch off all the fruit except one or two, which may be retained to test the kind. Never let more than three clusters remain on the vine the first year of fruiting, and never but one cluster on a spur. Discontinue the syringing of the vine while the fruit is in blow, and keep the house more closed and warm. As soon as the fruit is formed, pinch off the end of each spur about an inch above the first leaf beyond the cluster, and all the other spurs three or four eyes from the vine. Do not allow the spurs to be closer together than eight inches; rub off all that are nearer. As the eyes burst and push out, continue to pinch off the shoot, always an inch above the next eye. This you will have to do six or eight times during the season, to every spur, to keep them in check, or "at home," as it is called,

and that the light may strike the vines on the back wall, (which are not in fruit this season—not doing as well as the front vines, that receive the full force of the light and sun.)

When the fruit has attained the size of a pea, go through the vines with a pair of sharp pointed scissors, and thin out the fruit full one half, always taking the smallest berries; and from time to time go over the vines and thin out the fruit until it begins to color, after which time it will be of no use. This will be about the 5th of August. Up to this time you have watered regularly with the soap-suds and guano, and syringed the vines from one to three times a day, as the weather has admitted. As soon as the fruit begins to color, discontinue the watering, and keep a current of hot dry air passing through the house, that the wood may get thoroughly ripened and prepared to do its duty next season. And if the fruit should turn soft and feel cold, cut it off at once; your vine is overcropped, and if suffered to stay on, will destroy the crop for another season and very much weaken the vine.

About the 20th of June, sprinkle two pounds of the flour of sulphur at mid-day, when the house is hot and dry, that some of the dust may fall on the foliage. This will prevent the mildew. Repeat the same about the 1st of August. By the 15th of August the *Chasselas* grape will be ready to cut. Keep the current of hot air passing through the house. Pinch off the upper end of the vine to stop the growth and throw the sap into the lower part of the vine, and swell the buds.

September 15th. *Black Hamburgh* are now ready to cut. Your *Black Prince* and *Frontignan* will hang on the vine until December, if you keep the house open and cool.

December 15th. Cut the vines back to within two feet of where you did last year, and all the spurs to within an eighth of an inch of the vine. Don't fear for your fruit next season; there will be plenty of buds push from the base of the spur. Wash the vines with a preparation of soap-suds and sulphur—four pounds of sulphur to two quarts of soap-suds, mixed to the consistency of cream; apply with a paint brush, and be sure to touch all the parts. Some add a little tobacco. Cover the vines with straw, and the border with manure, the same as last year.

THIRD YEAR.—As the season advances, open the house often when it is warm, to keep the vines back so that the buds will not push too soon. Better not uncover until the 10th of April, than have the buds push and then receive a check. When you do start them, water the house freely and keep up a moist atmosphere, and guard against a check. Uncover the borders, and replace with new or fresh manure from the barnyard, to warm the roots. Examine the drain, to see that all water is carried off readily; for much—yes, one-half of your success depends upon keeping the roots in a proper state; no stagnant water must on any account be allowed to remain at the bottom of the border. Let the vine remain down on the border the same as last year, until the buds have pushed one or two inches; then raise by degrees. Several eyes will push from the base of last year's spurs; rub off all but one, so that the spurs will be about six or eight inches apart on the vine. Always rub or pinch off the spur; never cut. Water regularly the same as last year. As the fruit shows

itself, select six or eight of the finest looking clusters on each vine, and pinch off all the rest at once. Keep the house closed and still during the time the fruit is in blossom, and not touch the vine with water until the fruit has set. As soon as this is completed, pinch off the end of the spur one inch above the next eye from the fruit, and all the others, except the leading shoot at the top, which you of course tie up to a wire trellis.

June 1st, remove all the rough and loose manure from the border, and fork in the remainder. June 10th, mulch the border with tan bark, about two inches thick, to keep the roots in an equal temperature and prevent the sun from operating too powerfully upon them. Care should be taken that there be at no time a sudden change in the house; open by degrees, and close in the same manner. If the leaf turns yellow, examine the glass; there is probably a defective light of glass, which draws the sun and scorches the vines. If the glass is defective, wash it on the inside with a preparation of whiting and boiled oil and turpentine. Never syringe the vines when the sun shines upon them; get up the moisture by keeping the floor wet.

When you prune the old wood of a vine, (which may be done without detriment, or danger of its bleeding, any time after the 1st of July,) use a very sharp pruning knife, and make one smooth, straight cut. The leading ones must be stopped soon after they reach the top of the house; but leave two or three laterals, to keep the sap in motion, which are to be stopped at intervals of two or three days. Pinch off all tendrils, and keep the whole strength of the vine in as small a compass as possible; but never remove the leaves from the vine, or you will destroy the flavor of your fruit. If you require more light, spread out the spur and tie it to the trellis. There should be at least one leaf between the fruit and the sun. Be sure and give plenty of air and room to the clusters, that they may get perfectly ripe, or the flavor will be destroyed. *Black Hamburg* should be *black*, not red, as is frequently the case, from being kept too close and confined, and not open to the air, as they should be.

In selecting your fruit, care should be taken to have it equally distributed over the vines. This will add very much to the appearance of the house as the fruit progresses.

Tie all the spurs to the trellis as soon as the fruit has set, water regularly, sprinkle with sulphur the same as last year. When the fruit has attained the size of a small pea, commence to thin out, always taking the smallest berries. If you want large berries, you must thin out severely; take two out of five berries; the strength will enter those that are left, and cause these to grow beyond your expectations.

Then commence to shoulder or tie up the clusters, and spread them out so that the air will pass freely through the clusters, and ease the main stem. After the fruit begins to color, avoid all handling. If you touch the fruit, it will destroy its beauty, and cause it to rust. If it is necessary to handle it after this stage, use a glove.

Give the vinery plenty of air, plenty of heat, and plenty of moisture. Remember that large fruit and large clusters are the objects to be attained.

This is the manner in which I have treated my vines for the last three years, and never have had any trouble from rot, rust, insect, shriveling, or shrinking; and in seventeen months from the time the vines were planted, I took the second premium

at the State Fair at Rochester; and this season the first premium at Utica, having raised nine clusters on each vine, and exhibited grapes the weight of which was as follows: *Black Hamburgh*, 2 lbs. 12 oz.; *Zinfandel*, 2 lbs. 14 oz.; *Black St. Peters*, 3 lbs. 2 oz.; and all were ripened by the 5th of September, although the season was backward and unfavorable.

What the vines will do another year, of course remains to be seen. I think, however, they are in good condition, the wood being well ripened; and with proper care, a good crop may be expected.

It will be seen that this statement is plain and to the point; and could I have had these notes to refer to when I commenced, they would have saved me a great deal of trouble. And I think that with these notes, and the help of DOWNING's work and a work on the grape published by J. F. ALLEN, Boston, Mass., any one may raise the foreign grape without any fear of failure. And certainly, to see the house well in fruit one season, will go a great way toward paying for what some would call trouble.

ON THE CLIMATE, &c., OF THE SOUTH SHORE OF LAKE ERIE.

BY J. P. KIRTLAND, CLEVELAND, OHIO.

[THE following article appeared in the *American Journal of Science and Art*, March, 1852. We reprint it for several reasons:—1st, It furnishes some very instructive and interesting items in relation to the climate and natural history of one of the finest fruit growing and horticultural districts of the west. 2d, It shows the influence of bodies of water upon climate, and gives a full and clear explanation, both scientific and practical, of the nature and operation of this influence. 3d, It is an example of the kind of observation that should be made in every part of the country respecting such local peculiarities of climate, and their causes as affect vegetation.

Astronomical, and other scientific societies go to great expense in making such extended observation as the objects they have in view require, and we know of no way in which horticultural societies could more efficiently promote the advancement of their science than to institute such observations as these in their respective localities.—Ed.]

Peculiarities of the Climate, Flora, and Fauna, of the South Shore of Lake Erie, in the vicinity of Cleveland, Ohio.

Very erroneous opinions are entertained, by even intelligent people, respecting this section of country, so far as its climate and the species of the animal and vegetable kingdoms are concerned. A series of observations, embracing a period of ten years, have disclosed some interesting facts upon these points.

The locality where these observations were made, is situated five miles west of Cleveland, half a mile from the lake, one hundred and fifty feet above its surface, and fully exposed to its influence. During the ten years, the temperature has in no

Point of observation near Cleveland.

[illegible]

At the present moment, October 25th, vegetation is as verdant and thrifty as it has been at any time during autumn, though it was cut down throughout the West generally several weeks since.

In the middle and southern sections of Ohio, spring sets in during the month of March—perhaps earlier. The warm winds blowing up the valleys of the Mississippi and Ohio, in conjunction with other causes, bring forth vegetation earlier; but cold weather and disastrous frosts too often follow.

The lake rapidly imbibing heat at this season, becomes a safeguard against any subsequent vernal frost. Its influence was manifested in a satisfactory manner, early in the present season. On the 1st of May, spring seemed to be fully established; fruit trees had blossomed, and in some localities young fruits had formed. The morning was cold and the temperature declined during the day and evening. At 2 o'clock P. M., it was 48° Fahrenheit; at 7, 34°; and at 9, 32°. The atmosphere was calm and clear, indicating to an inexperienced observer the approach of a destructive frost. At 10 o'clock P. M., it had risen to 40°; a heavy cloud of haze hung about twenty degrees above the lake and soon overspread the whole horizon. The morning of the following day was warm and misty; by 12 o'clock M., it was clear and spring-like.

Not a fruit-germ was injured on the lake shore. A different state of things occurred throughout the West and South-West, where no local influences interposed. The temperature steadily declined, without intermission, during the day and night, down to about 26° . The day following was cold and blighting, and fruits were generally destroyed.

The modes by which the lake exerts its influence on such occasions, do not appear to be uniformly the same at different times.

On the approach of a cold night, as in the instance above noticed, the warm emanations condensing may give off caloric, and obscure the atmosphere with haze, mist, or clouds, when no frost will occur.

Under circumstances apparently similar, on the approach of a cold night, neither haze, mist, or clouds may form, but a stiff breeze springs up, and the stars become unusually brilliant. The thermometer vacillates between 32° and 38° , rising with the gusts of wind, and falling during the intervals of calm. *Then* no frost will appear.

Again, none of these modifying causes may intervene, but the temperature may fall below freezing point, ice form on the surface of water, and the expanded fruit, leaves and blossoms congeal. Under such circumstances, the first rays of the rising sun the next morning will be arrested by a haze, which will soon thicken, and before noon a warm rain will probably fall. The frost will be abstracted so gradually from frozen vegetation as not to impair its vitality.

These contingencies have all occurred within the period of our observations. The year 1834, proved an exception.—The general cold prevailed over the local warmth of the lake; freezing weather continued two or three days, and fruits were cut off, even on the shore of the lake.

In autumn, this great body of water begins to part with its warmth to the colder incumbent atmosphere, and the process continues during the winter. While its progress is most rapid, strong southerly winds prevail at the earth's surface, while volumes of clouds, at a high elevation, may at the same time be moving rapidly in an opposite direction.

These counter-currents have sometimes given origin to a phenomenon in the city of Cleveland, not well understood by all of its good citizens. The vane of the lofty spire of the Baptist church, standing on a high ridge of ground, may point steadily to the north, while that on the low cupola of the First Presbyterian church, situated on a less elevated plateau, may be directed to an opposite point of the compass, with a stiff southerly breeze at the same time.

Cool north winds begin to prevail about the middle of October. The emanations from the lake then begin to condense and pass off to the south, in the form of thick clouds, without discharging, at first, much rain. About the 20th of October, the cold from the north seems to gain the ascendancy; squalls of rain, hail and rounded snow appear alternately, with intervals of clear and warm weather. These squalls always precede the autumnal frosts. Our gardeners feel no apprehension for their tender vegetables till these premonitions have appeared.

Common observations, as well as the more sure test, the rain-gauge, show that larger amounts of vapor from the lake are carried south, condensed in the form of rain and snow, than fall in this vicinity.

During winter, comparatively little snow falls, and still less accumulates here, though it may be abundant on the higher grounds, thirty or forty miles in the interior.

This region is also not so frequently favored with showers in summer, as the central portion of the State. Long and severe drouths often prevail, but they are in part counteracted by moisture in the atmosphere. This quality sustains vegetation, and also imparts a freshness to the atmosphere during the hottest days of summer, very observable on approaching the lake from the interior. During that season it is peculiarly pleasant and invigorating to invalids, and equally harrassing to them during the spring season.

The indigenous vegetation of this vicinity is of rather a southern type—shown by the absence, in a great measure, of evergreens, and the occurrence of more southern genera, as the *Cercis*, *Ilex*, *Æsculus*, *Nelumbium*, *Gleditschia*, *Magnolia*, &c. *ELIOTT'S Botany of South Carolina and Georgia* has been found to be a convenient hand-book for investigating our flora. On the other hand, strange hyperborean plants are frequently found, which have been washed down from the far Northwest, through the chain of great lakes.

Many of our birds are species whose most northern ranges of migration have been assigned many degrees south of this, by ornithologists. The hooded, Kentucky, yellow-throated-wood, cœrulean, and prairie warblers, annually rear their young in this vicinity. Trail's fly-catcher, and the piping plover, have been repeatedly seen here, and the purple ibis is an occasional visitor. The list might be greatly extended.

Great numbers of the *Sylvicolæ* semi-annually congregate here, during their migrations, and seem to make it a resting-place, both before and after passing the lake. More northern species occasionally resort here during winter for the purpose of obtaining food, or are driven here by storms; such are the pine-grosbeak, and the white owl. The Bohemian wax-wing visits us almost every winter, and sometimes in large flocks. The pinefinch is described, by some ornithologists, as resorting to the United States only at long intervals, and during winter. It visits our gardens and grounds in numerous flocks every season, early in July, and remains here till the ensuing spring. The young, at their first appearance, still retain much down about their plumage, and cannot have been long absent from their nests. The food of these birds is *Aphides* during summer, and at other times small seeds of grapes, and other vegetables.

The insect tribes show still more strikingly southern affinities. The *Papilio Cresphontes*, figured and described by *BOISDUVAL* and *LE CONTE*, as the *Papilio Thoas*, has been repeatedly taken here: though it has been considered as exclusively southern in its resorts. In the South, the larva feeds on the orange and lemon; here, *Major LE CONTE* informs me, it lives on the Hercules-club.

The *Papilio Ajax* and *Papilio Marcellus* have also been described as southern insects; and the late *Mr. DOUBLEDAY* located the former exclusively in Florida, and fixed the most northern limit of the latter in Virginia. Still they are common at this point, and subsist in the larva state, on the pawpaw. An undescribed species of

Libythea has been taken in Northern Ohio; it has been found, also, in South Carolina, and is without doubt legitimately a southern species.*

The *Chaerocampa tersa*, an elegant miller, was taken in our garden, in the month of May last. Dr. HARRIS describes it as a native of South Carolina, where it feeds on a species of plant which does not grow at the North.† The food it finds as a substitute has not been ascertained.

COTTAGE GARDENING.

BY WILLIAM WEBSTER, ROCHESTER, N. Y.

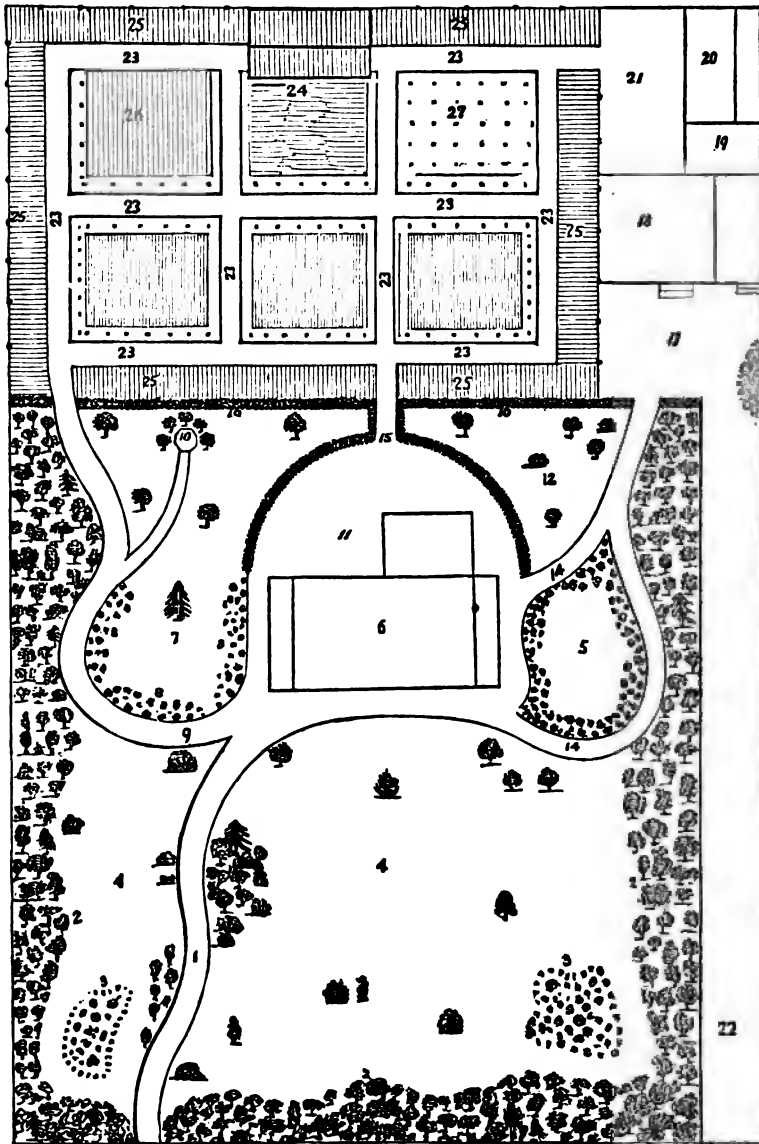
It can not but appear, to even the most ordinary observer, that there is an increasing and growing interest for that style of architecture in our cottage residences which our late highly valued and lamented friend DOWNING labored so incessantly and effectually to introduce; and that such is the case, we have abundant evidence of in the many chaste and elegant cottages which we see springing up around us; but still, in many instances, we see his plans but imperfectly carried out. I now allude to the formation and embellishment of the grounds; for no matter how beautiful or chaste the dwelling may be, if the grounds are not in keeping, it can at most display but an imperfect taste. Hence my object in offering this design is not to make a display of any elaborate or intricate plan, but merely to show how simply such a place as is here represented may be laid out and still possess all the characteristics of a comfortable and retired home; and when such a place is neatly kept, it can not fail to stamp the proprietor as a man of taste and refinement.

In the working out of this design, my object has been to introduce that form which is most pleasing, and best adapted to the wants and requirements of that class who are possessed of a moderate income, and who, wishing to enjoy all the comforts of a retired home, may be able to do so at a moderate expense. The pleasures and advantages derivable from a garden of this description are manifold. The man who takes delight in gardening, is always stimulated to further exertion by the delight which he experiences in viewing for the first time in his own garden the opening of some choice flower, or in the gradual development of some rare fruit, until finally he has his sense of taste and smell gratified by its delicious taste and fragrance. This plan is capable of being reduced or extended so as to apply equally as well for one acre, or five, or six, as circumstances may require, or in other respects altered as may best suit the convenience of those wishing to adopt it.

The form of the ground in the plan is a parallelogram, this being the form most frequently met with in places of this size, and is 200 feet front and 300 feet deep; and when laid out and planted, will appear much larger than it really is. The alterations or improvements which can be made in this plan, are by making two walks,

* See the figure and description in No. 76 of the *Family Visitor*.

† See Dr. HARRIS's very valuable Catalogue of American Spiders, in Vol. XXXVI., *American Journal of Science and Arts*. The student of Entomology will there find the history of this intricate family made plain by the labors of Dr. H.



PLAN OF GROUNDS FOR A COUNTRY OR SUBURBAN RESIDENCE, 200 FEET BY 300.

each entering at C, immediately at the right and left of the entrance gate, and continued along the boundary belt until they connect with walks 9 and 14; or, if thought more desirable to have a carriage entrance, by widening the main walk, making it 12 or 14 feet wide: thence conducting it to walk No. 14, which can also be widened, to the stable-yard, which is of sufficient size to turn a carriage in; in this case the lane can be dispensed with, which will extend the lawn. My object in making a main walk instead of a carriage road, is to keep the front part of the lawn from being cut up any more than necessary. Other improvements might also be made, such as the placing of a few rustic seats, rustic flower-baskets, or any other ornament of a similar nature, in different parts of the lawn, such as may best suit the taste of the proprietor.*

The Grape house is an appendage which can scarcely be dispensed with in a place of this description, the utility of which is becoming more and more appreciated. I may have occasion to enter more fully into the details of this at some future time.

The dotted lines on each side of the center walk, represent two rows of dwarf pears, apples and cherries; the dots marked, are the spaces they will occupy,—six to each bed, six feet apart, making in all three dozen. The dots on the fence are for wall trees, or grape vines, two dozen in all, twelve feet apart. The smaller dots around the vegetable beds, are for gooseberries and currants, three dozen in number, four feet apart. The wall trees, or grape vines, should be trained on a trellis, inside the fence, and at such a distance from it that the air may circulate freely between the trees and fence; from four to six inches is a sufficient distance. It will be found more desirable to plant dwarf trees in a small garden of this description, than standards. The trees on the fence occupy but a small space, and will amply repay the cultivator for the extra labor of pruning and training, in the superior quality of the fruit.

I think the Kitchen Garden will also be found amply sufficient for the culinary use of a moderate sized family; if not, it can easily be enlarged by bringing it nearer the house.

I trust, with the explanations here given, and where due discrimination is exercised in the selection of such trees and shrubs as are most suitable for such a place, that the results may prove highly satisfactory.

* The following key to the plan explains the locality of all objects connected therewith:

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|---|---|
| 1. Main walk from highway, and leading to house; seven feet wide. | 14. Walk from dwelling to stable yard. |
| 2. Boundary belt of deciduous trees, evergreens, and shrubs. | 15. Pathway from house to kitchen garden. |
| 3. Irregular beds cut in turf, for shrubs, &c. | 16. Evergreen or privet hedge, separating lawn from kitchen garden. |
| 4. Lawn, interspersed with trees and shrubs. | 17. Stable yard. |
| 5. Patch of grass, with irregular flower beds cut in turf. | 18. Carriage house and stable. |
| 6. Dwelling house. | 19. Cow house. |
| 7. Parts of lawn. | 20. Poultry house and yard. |
| 8. Irregular flower beds. | 21. Yard in rear of stable, and connecting with kitchen garden. |
| 9. Walk from dwelling to summer-house and garden. | 22. Lane leading from highway to stable. |
| 10. Rustic summer-house. | 23. Garden walks. |
| 11. Yard in rear of dwelling. | 24. Grape house and vine border. |
| 12. Patch of grass, the dots denoting trees and shrubs. | 25. Border, ten feet wide, around the kitchen garden. |
| 13. Evergreen screen, enclosing rear of house and back offices. | 26. Square for rhubarb, asparagus, and sea kale. |
| | 27. Square for raspberries. |

Literary and Horticultural Notices.

THE CULTURE OF THE GRAPE, AND WINE MAKING. BY R. BUCHANAN. Cincinnati. Second Edition.

The most complete and reliable publication we have yet seen, on the subject of Vineyard Culture, and Wine Making, in America. It is the fruit of large experience, not only of the author himself, but of many of the most intelligent and observing gentlemen around Cincinnati, who are practically concerned in this culture. We commend it to all who are seeking information on the subject.

From this work we take the following article by Dr. Mosher, a distinguished horticulturist, and an experienced grape grower :

"VINEYARD CULTURE OF THE GRAPE—SPRING AND SUMMER PRUNING.—As I think much experience and observation are required to arrive at the best methods, I shall give only what has proved most successful with me. My vines, or a portion of them, have been planted nine years; the rows five feet apart, and the vines three feet distant in the rows. Roots, one year old from the cuttings, were planted after being cut close down to the crown. The first year they were allowed to grow without any other care than keeping the ground clear from weeds. The second spring, early, the tops were all cut down to two eyes, and a stake driven to each vine, six or seven feet long. One or two of the best shoots were allowed to grow, all others rubbed off. These two shoots, or canes as they are technically called, are tied up to the stakes when they have grown eighteen or twenty inches in length, and should be kept tied from time to time, as they advance in height through the second summer; little or no pruning will be required this season.

"The third spring, I would cut these canes down to two eyes; although some of the strongest might bear fruit the third summer, it is much better to let them grow another year, and become strong, before raising a crop. This season more attention is required, and they must be prepared to bear a good crop the fourth summer. The two most thrifty shoots must be selected the third spring and kept tied with rye straw, or some other strong and suitable material, to the stakes, as in the second summer. This year I pinch off all the lateral or axillary branches between the thumb and finger-nail before they become too large and woody—otherwise, if left too long, so as to require the knife, the determination of sap in that direction is liable to force out the sleeping eyes, which should remain dormant till next year. These lateral shoots should be pinched off to the height of four or five feet, or as high as is intended to prune the next spring; after that they may be allowed to grow, as they check the extension of the main shoots.

"The two canes of this year will be strong and vigorous and soon rise to the top of the stakes, where they must always be strongly tied to prevent the effects of wind. About the first of September, and not much before, the extremities are pinched off to arrest their further elongation and growth—whereby the wood and buds become more perfectly matured. This finishes the work of the vines for the third season.

"We are now arrived at the fourth spring. The vines are old enough to bear a full crop, and we have two good thrifty canes ready for the knife; the old strings by which they were secured to the stakes are cut, and the tendrils trimmed off. The cane that comes off highest from the root is chosen to bear the whole crop, and is cut off about four feet from the ground, having from six to ten eyes according to the length of the joints; the other cane, which is often equally beau-

tiful, is cut down to two eyes, and is generally used for cuttings. From these two eyes two more shoots are trained, as in the previous year. After all are pruned, and just when the sap begins to flow freely and the vines are most flexible, the bearing cane is carefully bent round in the form of a hoop, and tied to the stake with willow twigs—one at the bottom, one at the top of the circle, and the third fastens the extremity either to the stake or to the vine below.

"I am often asked, why this hoop or circle? The answer is, gradually to retard the current of sap or juice, that each eye may receive an equal share, and prevent its rushing onward to the last eye or bud, which is sure to gain too great a share and to cause a growth too exuberant if trained upward with the stake.

"The operation of tying is performed with much dexterity by experienced hands, and should always be completed before the buds are much expanded, as then they are liable to be broken off.

"All my hopes and expectations of a crop are now centered in this little circle. If the winter has not been too severe every eye will shoot, and in a short time show the blossoms, from one to three bunches on each. After the berries are set, my vines are carefully inspected by the vine-dresser, and from ten to fifteen of the largest and most promising bunches are selected, and all the others are pinched off, also all unfruitful shoots that may have pushed out from the circle. I know that many of our vine men allow every bunch to grow for fear of casualties. This I have proved to be an error. Ten to fifteen bunches, according to the strength of the vine, are more likely to remain on and produce more mature fruit than twenty or more. The vines must not be over-taxed—too heavy a burden can never be carried to the end of the journey—but a light task will be more perfectly executed.

"Soon after the grapes are set and about the size of common shot, my rule is to pinch off the ends of the bearing branches, leaving four good leaves for the first bunch of grapes, and two leaves for every other bunch on the same branch—so that if there are three bunches there will be eight leaves to supply their wants. I have tried leaving these bearing branches to grow their full length without pinching them off, but I find they incumber the ground too much, without any perceptible improvement of the fruit. After these bearing shoots have been pinched off, especially if done too early, the buds in the axils of their leaves will push out. These I pinch off also when quite young, sometimes permitting one or two leaves to remain on them. The leaves on these laterals do not seem to subserve the wants of the fruit, like the original leaves on the bearing wood, which should be carefully preserved. At the fifth spring-pruning the vines will have the two good canes, as in the previous spring, with the addition of the old hoop or circle that bore fruit. This I cut off as close down as possible to the uppermost cane, and the other two canes are managed exactly in the same manner as in the preceding year. I never allow the old stock to rise more than six to ten inches above the ground—the lower they are kept the more healthy they will remain and be much more easily managed. Pruning the vine for wine requires a bold hand and much firmness of purpose, otherwise the old stock will get too high and become incumbered with too many shoots. It must be borne constantly in mind that one single bearing shoot or cane, having from six to ten eyes, will throw out as many bearing branches. From these ten bearing branches it will be easy to select from ten to fifteen bunches. These bunches, in any ordinary favorable season, may be made to yield one quart of good grapes, which will make, at least, a pint of wine. One acre of ground planted three feet by five will contain 2,904 vines. If each vine, then, yields one pint of wine only, there will be 2,904 pints, or 363 gallons, from each acre. This is more than the average yield per acre—and for the reason only that we are too greedy—by overloading the vines we fail to obtain a reasonable quantity, as well as a good quality of wine.

"The above contains most fully my views, derived from practice and close observation, on the subject of pruning the vine for wine. If you think they contain any hints that will aid beginners, or others, you are at liberty to make such use of them as you may think proper."

TRANSACTIONS OF THE NORTH WESTERN FRUIT GROWERS' ASSOCIATION, at their Second Annual Meeting, held at Dixon, Ill, Sept. 29 and 30, 1852.

THIS pamphlet furnishes very gratifying evidence that the Association from which it emanates has fairly entered upon a career of great usefulness. The nurserymen and fruit growers of the west stand in peculiar need of such an organization. They have a soil and climate differing, in most of their important features, from older portions of the country whence their varieties of fruits and systems of culture have been introduced; and every year's experience shows them more and more conclusively that, to be successful, they must have a system of culture as well as a selection of varieties adapted to their own circumstances. To collect any reliable information on these points, an annual consultation, such as this association brings about, is the most effective mode that could be adopted. It brings together the most experienced and observing men, and enables them to compare failures and successes, their systems of management and suggestions for improvement.

The experience so far acquired is so limited, and the views so various and conflicting, that the proceedings of the two meetings held do not throw much light on Western pomology, or at least do not guide us to any general conclusions of a satisfactory nature, either as regards modes of culture or the success or failure of any considerable number of varieties of fruits. The apple only has been discussed—all the other fruits remaining untouched. The Association, however, has done all that could be expected of it. It has made an excellent beginning; its usefulness is in the future. We look forward to the next meeting in Chicago, on the first Tuesday in October, 1853, with much interest; and if it were not so late in the season, would gladly meet our western friends on that occasion.

The committee appointed at the opening of the meeting (consisting of Dr. L. S. PENNINGTON, CYRUS BRYANT, C. R. OVERMAN, H. S. FINLEY, and A. R. WHITNEY,) to recommend a list of fruits for discussion and for cultivation in the west, reported the following:

EARLY APPLES—Carolina Red June; Early Pennoek; Keswick Codlin, for culinary purposes; Sweet June; Hocking, (local name.)

For limited cultivation.—Prince's Early Harvest; Sweet Bough; American Summer Pearmain

AUTUMN APPLES recommended for general cultivation.—Rambo; Maiden's Blush, (market and culinary); Gravenstein; Snow; Porter.

Recommended for further trial in the West.—Autumn Strawberry; Monarch; Fall Pippin, best fruit, but bearing variable; Sweet Nonsuch, (local name); Red Gilliflower.

WINTER APPLES recommended for general cultivation.—Yellow Bellflower; Rawles' Janet, in favorable localities; Willow Twig, prolific and profitable; Fallawater, (known as Mountain Pippin); White Winter Pearmain; Dominie; Winesap.

Recommended for limited cultivation.—Belmont; Talman Sweet, as a baking apple; Vandervere.

For further trial.—Detroit Red; Roxbury Russet; Ladies' Sweeting; Baldwin; Rhode Island Greening; Jonathan; Hubbardston Nonsuch; Swaar, (best fruit.)

We shall hereafter refer to the discussions on these varieties. The following is the list of officers for this year:

JOHN A. KENNICOTT, *President*.
ROBERT AVERY, ARTHUR BRYANT, W. H.
LOOMIS, *Vice Presidents*.

F. K. PHENIX, *Corresponding Secretary*.
SAMUEL EDWARDS, *Recording Secretary*.
ARTHUR BRYANT, *Treasurer*.

A TREATISE ON WESTERN POMOLOGY, by F. R. ELLIOT, of Cleveland, is spoken of in the western papers as soon to make its appearance.

BRITISH POMOLOGY; OR THE HISTORY, DESCRIPTION, CLASSIFICATION, AND SYNONYMS, OF THE FRUITS AND FRUIT TREES OF GREAT BRITAIN. By ROBERT HOGG.

We have received Part I of this work, devoted to the apple. It describes 942 varieties—a snug little list. When we have had leisure to look it over, we may cull something interesting from it.

THE NORTH AMERICAN SYLVA of MICHAUX, with NUTTAL's supplement, has been published in six splendid royal octavo volumes, by ROBERT P. SMITH, of PHILADELPHIA, with notes by J. JAY SMITH, Esq. It contains 277 finely colored copperplate engravings. It is a work that should be in every library in America. We shall soon give some extracts from the work, and a specimen of the plates.

The fourth volume of HUMBOLDT's *Cosmos* is finished, and in the hands of the publisher. We may expect it soon.



Foreign Notices.

THE NEW CRYSTAL PALACE AT SYDENHAM.—It is now pretty well known that the site chosen for the re-erection of the Crystal Palace is an irregular parallelogram of about 800 acres, extending from the Brighton Railway, where it has a frontage of 1300 feet (between the Sydenham and Anerley station), to the road which borders the top of Dulwich-wood, where it has a frontage of 3000 feet. The fall from this point to the railway in question is stated to be about 200 feet. It was at once felt that the most eligible position for the new building was on the summit of this hill, and immediately adjoining the road. The building placed in so commanding a situation will be visible from London on the one side, and from a vast extent of country on the other. The only little inconvenience attending its erection on a hill is the want of water to supply the various fountains with which the terrace garden and park are to be decorated. This, however, is to be overcome by boring for it at the bottom of the park, near the railway, and raising it in pipes underground by steam power to a large reservoir at the north end of the building, to the top of a tower, on which it will again be pumped up, so as to give sufficient fall for the gigantic purposes to which it will be afterwards applied. Notwithstanding the wetness of the weather, the heavy operations connected with the formation of the terrace garden and the ground work in the park are now in rapid progress. About 1000 laborers have been employed for the last three weeks in levelling the ground, and forming basins for the various fountains, &c. As yet, however, nothing has assumed its proper form; and therefore, to an ordinary observer, all is in the meantime apparently confusion. We understand, however, that everything will be on a grand scale, so as to correspond with the noble building itself. We learned from Mr. MILNER, to whom the

carrying out of the work has been entrusted, that on the park side of the palace, and running parallel with it during its whole length, will be a raised terrace walk 48 feet broad, which will be approached from the basement floor of the building immediately under the center transept (for it is to have three) by a flight of granite steps 120 feet wide. This walk will be furnished on the side farthest from the palace with balustrades and bastions, which will overlook a grass slope 50 feet wide; and then a terrace garden ornamented with flower beds on grass, fountains, shrubs, and trees, and intersected in various directions by broad gravel walks. This garden will be 300 feet in breadth, closed in at the ends by the two projecting wings of the palace, and cut off from the park by an ornamental terrace wall, also furnished with bastions and balustrades. The two projecting wings of the building will terminate in two towers, each 96 feet in height, from which, as well as from the various bastions, a fine view of the terrace gardens, the park, and the wide spreading valley beyond, will be obtained. The most extensive view of the surrounding country, however, which is on all sides highly picturesque, will be had from the building itself, along whose whole length we learn there is to be an open colonnade. A walk 96 feet broad will lead, by a flight of steps of the same width, from the center of the terrace garden to a fountain and circular basin, 192 feet in diameter, at a little distance in the park; and after passing round this basin, will proceed in the direction of Penge Church, till it terminates in another circular basin and series of magnificent fountains, whose equals will only be found in such great gardens as that of Chatsworth itself. To give some idea of the magnificence of the display that may be expected to be found here, we may mention that the center column of water will raise 280 feet in height; around that will be four fountains, each 120 feet in height, and these again will be surrounded by 16 others, each 72 feet in height. Nor is this all; there are other groups as grand, besides multitudes of smaller decorations of a similar character, which in themselves will doubtless be worthy of Sir JOSEPH PAXTON's skill and experience in the construction of such matters. On the south-east side of the great fountain just described, will be a lake covering 5 acres of ground; other ornamental water will chiefly consist of two stripes on either side of the principal walk, just below the first fountain. These are to be each 450 feet in length, and will be fashioned into cascades, which will fall into broader pieces of water on the right and left of the walk, and lying at right angles to it, each 1000 feet long. These two latter pieces will each contain fountains of great power and beauty, so that there will certainly be no want of decorations of this kind, which tend so much to set off pleasure-grounds to advantage. On two little knolls on either side of the principal walk, but at some distance from it, will be a flower garden with an arbor or some erection of that kind in the center, and all round these, as well as in the neighborhood of the fountains, and indeed all in front of the terrace garden down to the south-east extremity of the ornamental water, will be dress grounds, interwoven with walks, margined with flower beds and shrubs, of which it will be seen an immense quantity will be required both for this portion of the park and for the terrace garden. Report says that 50,000 scarlet *Pelargoniums* have been contracted for. Sir JOSEPH PAXTON, however, we believe possesses classified lists of what plants of the kinds wanted, English nurseries are capable of supplying; but with respect to purchases, little definitely has been done, with the exception of the buying Messrs. Loddiges collection mentioned at page 616. It will thus be seen that the gardening operations connected with this great undertaking are as yet comparatively in their infancy, and the directors will have much to do before all that we have mentioned above shall have been completed. Beyond the dress ground will be the open park, the inner side of which, where there is a considerable extent of wood and thicket, will be converted into a kind of gipsy ground, by forming walks through the wood; but not otherwise materially altering its natural character. This will afford an agreeable and cool retreat from the scorching heat of a summer's sun. By way of conclusion, we may mention that a new branch railway from Sydenham will set the visitor down on the south-east side of the park, at the end of a glass-covered walk, 48 feet broad, which will connect the station with the palace.—*London Gardener's Chronicle.*

FIRST MOSS ROSES.—On the first introduction of the old red *Moss Rose*, it was sent over with some plants of Orange trees from the Italian States, to Mr. WRENCH, then a nurseryman and gardener at Broomhouse, Fulham, in or about the year 1735. It remained in that family nearly 20 years, without being much noticed or circulated until a nurseryman of the name of GREY, of the Fulham nursery, now Messrs. Osborn's, brought it into note. In speaking of the first production of the the white *Moss Rose*, which took place in the year 1788, the first birth was from a sucker or under-ground shoot. My father, HENRY SHAILER, nurseryman, of Little Chelsea, an extensive grower of *Moss Roses*,* perceiving it to be a *lusus naturæ* from a stool of the red *Moss*, cut it off and budded it on the white *Provins*, or *Rose La Blanche Unique*. The buds flowered the following season a pale blush; he budded them again the following season; it became much whiter; it was then figured in ANDREW'S *Rosery*, under the name of SHAILER'S *White Moss*. He then sold it out, the first plants to Lord Kimbolton, then to the Marquis of Blandford, Lady de Clifford, the Duke of Gloucester, &c., at five guineas per plant. He continued to sell it at that price for three years; he then entered into a contract with Messrs. LEE & KENNEDY of Hammersmith, they taking as many plants as he could grow for three years, at 20s. per plant, binding him not to sell to any one else under 42s. per plant. After cutting down the shoots which produced the *White Moss*, it threw up two weak shoots which he budded from; they flowered the second season from the buds; that was the birth of the *Striped Moss Rose*, a most beautiful and delicate variety, but when grown very strong, apt to go back to the original parent. The first production of the single *Red Moss Rose*, in 1807, was a sport of nature; my father sent some plants of *Moss Roses* down to a nurseryman of the name of ESEX, in Colchester; on the receipt of a letter from that person, I went with my father to see it when it was in bloom; I took some cuttings away with me to bud; and fetched the original plant away in the following autumn to our nursery at Little Chelsea, from there we sent the first plants out at 5s. On the first production of the old *Scarlet Moss Rose*, which is a semi-double, it flowered on a plant given by my father to his brother, F. SHAILER, of Cook's Ground, and Queen's Elm, Chelsea, in 1808, nurseryman; the first production of the *Moss de Meaux*, was from a sport of nature from the old *De Meaux*, in the neighborhood of Bristol, but brought into a high state of perfection by Messrs. LEE, of Hammersmith. The birth of the *Sage-leaf Moss Rose*, I must claim myself; it was a sport of nature; I discovered it on a Sunday afternoon, in the month of June, 1813; I sold the whole stock to Messrs. LEE, of Hammersmith. It has a delicate shell-like form, and is a beautiful blush; it is now nearly extinct. The *Rose Blanche Unique*, or *White Provins*, was discovered by Mr. DANIEL GREENWOOD, of Little Chelsea, nurseryman; he was on a journey of business in the county of Norfolk, in the month of July, 1775, when riding very leisurely along the road, he perceived a Rose of great whiteness in a mill; he alighted, and on close inspection he discovered it to be a *Provins* Rose; he then sought an interview with the inmate of the mill, who was an elderly female; he begged a flower, which was instantly given him; in return he gave her a guinea. In cutting off the flower he cut three buds; he went to the first inn, packed it up, and sent it direct to my father, at his nursery, Little Chelsea, who was then his foreman, requesting him to bud it, which he did, and two of the buds grew; in the following autumn he went down to the same place, where for five guineas he brought the whole stock away; he then made an arrangement with my father to propagate it, allowing him 5s. per plant for three years; at the expiration of that time he sold it out at 21s. per plant, my father's share amounting to upwards of £300. Mr. GREENWOOD sent the old lady at the mill a superb silver tankard, &c., to the amount of £60. The *Shailer's Provins*, or *Rosa gracilis*, so named by Messrs. LEE, was raised from the seeds of the *Spineless* or *Virgin's Rose*, sown by myself in 1799, and flowered in 1802; we raised numerous varieties from seed up to 1816, generally selling them to Messrs. LEE, who sent them out under their own naming. I can vouch for the truth of the above.

—H. Shailer, in *Gardener's Record*.

* Faulkner's History of Chelsea.

Editor's Table.

CONVERSATION OVER A DISH OF PEARS ON NEW YEAR'S DAY.—Gentlemen, here is a dish of pears of which I should be glad to hear your opinion.

A. With pleasure sir; but be kind enough to inform us, in the first place, how they have been kept in such fine order. I had no idea that pears could be kept so well, and to tell the truth, I have never had much faith in winter pears. I have rarely seen one worth eating.

B. That has been my opinion; I would not give a good *Northern Spy* or *Swaar* apple for a bushel of the best winter pears I have ever seen.

Well, gentlemen, I am glad to have an opportunity of convincing you of your error. These pears have been kept in a cool, dry cellar, some spread on shelves, and some packed away in boxes among layers of straw. None of them have been ripened in a warm room; but I am sure that if they had, *some of them*, at least, would have been better than they are.

Now, by way of reserving the good wine to the last, we will pass around this handsome yellow pear, which I confess *looks* much better than it tastes. What do you think of it?

A. Barely tolerable sir. It is too dry and musky for my taste. It is not tender and melting, as I think a good pear ought to be.

What say you Mr. B.?

B. I agree with Mr. A.

Well, you are right, gentlemen. This is not really a good pear, *now*, for eating; but it is esteemed very highly in the kitchen, and I only brought it forward that I might tell you something about it. It is past its season; it should never be kept later than the middle of December. Up to that time it is pretty good to eat, and first rate for stewing and preserving. Then it is one of the best of growers and bearers, the tree is every year loaded with immense clusters, and they are always fair. Notwithstanding it has been cast out by the Pomological society, I still regard it as a most profitable and useful variety.

A. Would you recommend such a pear for a small garden?

No sir, by no means.

B. What is its name?

Bleeker's Meadow; it originated, I believe in Pennsylvania.

Well, here is another native pear, originated on Long Island. It is not so finely colored as the other, but you will find it more agreeable to the taste.

A. A good pear, sir; not buttery, like a *Virgalieu*, but juicy and fine flavored.

What say you Mr. B.?

B. I should call it good, sir, for this season of the year; and if it be a good bearer I should be glad to have a tree of it in my garden. What is its name?

Prince's St. Germain; a hardy, productive, valuable pear, and it keeps and ripens as well in the cellar as a *R. I. Greening* apple. I have always a full crop of it; but ~~had~~ that on the sunny side of the tree, and on all the exposed parts, where the fruits get that brown or ruddy tinge you observe on some specimens, they ripen well and acquire a fine flavor:

while those green ones, from the lower and interior parts of the tree, remain hard and insipid. But this is pretty much the case with all winter pears.

A. Can this pear be grown on the quince stock? No sir; but you can "double-work" it, as the nurserymen say—that is, bud or graft some variety like the *Virgalieu*, or *Duchess d'Angouleme*, on the quince, and then graft the *Princess St. Germain* on that.

Here is another Long Island variety that is coming rapidly into favor. It is called the *Lawrence*; you have no doubt heard of it.

A. This comes nearer my idea of a good pear than either of the others. I should call this *very good*.

B. So should I; really melting and fine flavored, like a *Virgalieu* in October. I must change my opinion about winter pears. But do you mean to say this has ripened in the cellar?

Certainly it has; and it is moreover a good grower and a good bearer, succeeding well both on pear and quince stock, in the orchard or the garden. A gentleman on Long Island has planted a large orchard of it, to grow fruit for the market.

Now I will introduce you to a foreigner, none of your vain, swaggering pretenders, however, that assume great airs to captivate and astonish the natives; but a plain citizen, under whose rough brown coat you will find genuine merit, I think. The name is *Winter Nelis*. On the other side the water, it is called *Colmar Nelis*, *Bonne de Maline*, *Beurré de Maline*, &c. What do you think of it?

A. Excellent, sir, excellent; the best yet. Besides being buttery and juicy, it has a rich vinous flavor, surpassing all we have yet tasted.

B. A first rate example of modest merit. If we never receive anything worse than this from abroad, I would say *the more the better*.

Well, here is another almost, if not quite, as good, but less talked of and less known. I think by and by it must be very popular.

A. How remarkable its form—as round as an apple; and its color is as clear and bright a yellow as the *Virgalieu* in October; and how luscious, fresh, and high flavored. I think it comes quite up to the *Winter Nelis*. Don't you think so, Mr. B?

B. I do, indeed; and it far surpasses it in beauty. How is its growth and bearing?

A capital grower, sir, and a good bearer; not so prolific as a *Bartlett* or *Virgalieu*. It grows equally well on pear or quince. The specimens you have tasted were grown upon the quince stock. It is almost past its season. Through all December it has been fine, eaten from the shelves in the cellar. It is called *Doyenné Sieulle*. You may note it as a first rate December pear.

We are not yet at the bottom of the dish, but the remainder of the gossip must be deferred till a future time.

OUR CLIMATE.—A fitful climate is ours, and it seems to grow more and more so every year. Some ten or fifteen years ago only, we reckoned upon such and such sorts of weather at certain periods of the year, especially during the fall and winter, with considerable certainty. We were able, in advance, to shape our course and trim our sail to suit the season of the year, and we were rarely disappointed. But latterly our calculations are all at fault, and we begin to feel that although we have studied our climate long and closely, we know very little about it, or that the little we do know affords us but a very uncertain guide in providing for the future.

This, the 10th day of January, 1858, is mild and sunny as the first day in April. The

Christmas Rose (*Helleborus niger*) is in full bloom in the border; Pansies are turning their cheerful faces to the sun, and if such weather continues, we shall expect the Crocuses to be pushing up and unfolding their gay petals. Yesterday a gentleman told us he saw robins in his garden hopping joyously around, apparently cheated into the belief that winter was over, or rather that it had forgotten to come. Draining, trenching, planting, and other out-door work, has been carried on to this time, with a few slight interruptions.

How different from last winter! It took us all by surprise. November had not fairly closed before we northerners were fairly ice-bound. Many of our tender plants were unhoused and unprotected; our autumn work was not more than half done. For a while people consoled themselves with the hope that it was only a squall and would soon break up; but it remained steadfast and grew more and more severe, until we were all exclaiming—"The coldest winter within our recollection." We are all apt to profit by experience, and especially by *dearly bought* experience. Hence, last autumn, along about the middle of November, there was such a preparation for winter as was never seen before. Plants were snugly housed; not a flaw in the glass, nor a crevice in the walls, but was securely stopped. Half hardy trees, unacclimated foreigners, were to be seen muffled up as though they were bound upon a visit to the regions of eternal snow.

These variations of climate, although attended with some difficulties, and frequently blight some favorite project, are not without their good. They arouse our energies, compel us to study, reflect and observe, with a spirit of perseverance that cannot fail to increase our stock of knowledge and multiply our resources. The memorably hard winter of 1851-2 taught us some lessons in horticulture that will not soon be forgotten. If the present winter continues as mild as it so far has been, or comparatively so, it will also teach us something. We have found that extremes of either heat or cold, rain or drouth, cloud or sunshine, are great teachers to those who cultivate the earth. Let us keep our eyes open and profit by what Providence wisely ordains to teach us wisdom, humility, and patience.

PEARS AND PRICES.—We learn from the best authority, that sales of pears have been actually made at Philadelphia this season at prices calculated to give an impetus to their culture beyond any former example. One remarkable specimen of *Duchess d'Angouleme* pear was sold at ISAAC NEWTON'S Fruit and Ice Cream store, in Chestnut street, Philadelphia, for *One Dollar!* and many specimens not quite so large, but very respectable in size, produced seventy-five cents *each* as soon as they were displayed in the window. Now this is very encouraging, certainly, to a man who can purchase a tree for from twenty-five to fifty cents, and sell the produce at even half or quarter the above prices. In addition, we are assured that Mr. NEWTON was selling a stock of *Vicar of Winkfield* pears, on December 2, 1852, at seventy-five cents a dozen, to eager buyers! Our correspondent says he immediately sat down and ordered pear trees for all the vacant spots he could find in his garden. We only add that we think him a sensible man.

AN ORANGE-COLORED GLOBE AMARANTHUS.—Messrs. HOVEY & Co., of Boston, advertise seeds of a new orange-colored Globe Amaranthus, the heads of which they describe as being "one-half larger than the common, and of a deep, rich, glowing orange." It must be quite an acquisition among annuals.

GRAPES.—The *Muscat of Alexandria* is considered by many of the most successful English grape growers as the best variety in cultivation. What say our growers? The *Black Barbarossa* is a new variety spoken of very highly in England.

PLANTING FOR POSTERITY.—"There," said a gentleman to us the other day, pointing to a fine group of pine and other trees, "my brother is about to build himself a house; those trees were planted for him by my father upwards of twenty years ago." How fortunate this man to have such a father. Here he builds his house among those fine trees, and enters at once upon their enjoyment. He gains twenty-five years of time, and not only that, the plantation has a ten-fold value in its history and associations. It is a family monument. A beautiful example this for fathers. Such an inheritance has a moral as well as a material value.

We have another instance of a like character. A widow lady, who possesses a large and beautiful estate in Western New York, informed us recently that she was about to plant and improve a tract of ground for the future residence of her son, who is yet a child.

Is there any other way in which parents can better provide for the physical future of their children?—anything that can impress the minds of children with more enduring gratitude to the parent and teach them their duty to posterity? We are happy to be able to record such instances. It shows that society is at least approaching a condition of *permanency*, without which it were vain, indeed, to expect people to project or execute any liberal plans of improvement for the future.

Taking a pecuniary view of the matter, what better legacy could a farmer, in one of our fine fruit growing districts, leave to his sons than an orchard of five or ten acres of apple trees or pear trees just coming into productiveness. Would it not be quite as well as purchasing for him a farm in the far west, scattering his family far away from the homestead and breaking up the ties that bind them to home and kindred? The migratory spirit that prevails so wide and deep among us is a deadly foe to that high culture which it is the wish of every man to see, and to all those feelings of attachment to home from which springs the brightest charms and greatest blessings of society. Think of these things you who are laboring so ardently for posterity. Turn your attention to planting. This is a kind of investment not easily affected by the ordinary ebb and flow of human affairs. Plant!—Plant for posterity!

DOMESTIC RAISINS.—We have just received a box of nice raisins prepared from the *Isabella* grape, by Mr. E. A. McKAY, of Naples, Ontario Co., who has one of the most complete little vineyards in Western New York. We have passed these raisins around among our friends, and they have invariably been pronounced *excellent*, some preferring them to the imported article. Mr. McKAY informs us that they keep well, and they certainly appear as though they would. Why may not this become an important branch of fruit culture? A very large amount of money is annually sent abroad for raisins. The matter deserves attention.

PRUNING—SHADE TREES—PEARS ON QUINCE.—Will you please to answer, through your first number, if convenient, the following queries, or give us an article or articles on them.

1. At what *times* in the year should the different kinds of pruning be performed in the cold latitudes of the north and in the milder climates of the south?
2. What are the twelve best shade trees (I mean deciduous trees) for lawns and streets in our cold climate?
3. What are the best three pears for double-working on quince; or, in other words, what three pears *unite* best with and grow most vigorously on the quince?
4. What pears of *American* origin will grow single-worked, or double-worked, on the quince?

In order to help the matter along, or rather to allow you a chance to criticise me, I will now attempt to answer these queries myself. My *present* opinions are, that

1. The heavy pruning (which is never necessary upon a well-trained tree) should be performed at the season when the leaves are off; the light pruning, in the season when the leaves are on the tree. I believe this rule will apply in *all climates*. But you, of course, will go more into detail.

2. The twelve best trees are, perhaps, American Weeping Elm, Horse-Chestnut, Sugar Maple, Norway Maple, Silver-leaved Maple, European Linden, White Ash, European Ash, American White Beech, Black Ash, Scotch Elm, Huntington Elm. To these, perhaps, we might add European Sycamore.

3. The pear which unites best with, and grows best upon, the quince, is the *Glout Morceau*. Indeed, this pear, in its leaf, wood, and fruit, seems to be a sort of second cousin to the quince, or at least as nearly related as *neighbor-in-law*. Other fine growers on quince, are *Beurré d'Amalis*, *Beurré Diel*, and *Vicar of Winkfield*. But please add to, or correct, the list, as it seems to you best. GEO. JAKES.—*Worcester, Mass.*

[The above communication should have appeared in the last number, but was accidentally overlooked. The subjects touched upon are of such importance, and involve so many considerations, that instead of replying to them in the usual brief way, we have thought it better to take them up separately and treat them somewhat in detail, or in a series of articles, as suggested by our correspondent. Street and Avenue trees, and Pruning, have already been noticed. Other subjects will be found answered in the present number.—ED.]

THE CRESCENT SEEDLING ONCE MORE.—So many readers of the *Horticulturist* have expressed a wish to be more particularly informed respecting the *Crescent Seedling* strawberry, that I have written to Mr. LAWRENCE, of New Orleans, and learn from him that his manner of cultivating it is very simple. He says: "I give it all it requires to perfect its fruit, and check the luxuriance of the vines by reducing our rich, alluvial soil two-thirds—that is, I add two-thirds river sand to it. This mode likewise enables the plant to withstand the excessive hot months of June, July and August. In fact, the soil best adapted to my seedling is a sandy loam; and I also know, by experience, that the less manure of any kind used, the better it is for the plant. In planting, I never mulch; I place the plants 10 inches apart in the rows, and the rows 18 to 24 inches apart. In dry weather I water copiously two or three times, in as many consecutive days, and then let them take care of themselves for awhile. When the ground is moist from previous rains during the planting season, I never water. I transplant *every year* into new beds, as new soil is preferable to old, and besides, as I have noticed in a former letter, the old stools die out completely by over-production of fruit and incessant bearing. I gathered the *last fruit of the season* on the 25th of July, which is seven months, to a day, since they commenced bearing—December 25, 1851. This experiment of mine, accidental as it is, I consider as one among the wondrous productions of nature. A similar accident may not occur again for many years, and I have been always impressed with the belief that I have been aided and assisted by our climate in producing this truly extraordinary strawberry; and although I give myself but little credit, yet I am happy that it should be so widely known and favorably noticed throughout the Union, and, although I disliked it, I could not prevent my name going forth in this connection. My only aim is pleasure and amusement in this delightful climate of ours."

A few weeks ago Mr. LAWRENCE answered my minute inquiries on the subject as follows:

"1st. The runners bear the same season they strike.

"2d. It is the same identical plant which bears fruit so fine and large in January, and which continues to bear a constant crop until the July following. Weak plants are shy bearers at all times. I plant none but the strongest plants (runners); the weaker ones I neither use nor dispose of until such time as they are fit to set out. I am disposing of my seedlings so rapidly that it is doubtful whether I can supply the demand."

Mr. L., in a previous letter, informed me he had sold 20,000 plants. I consider Mr. L.'s suggestions, in regard to the cultivation of the strawberry, valuable for our soils and climate. I am no more disposed to enrich our soils for the strawberry, with ordinary manures, than Mr. L. It should be remembered that our seasons are of different length than the seasons at New Orleans. My *Crescent Seedlings* are very strong and vigorous, and I have already forwarded to B. M. WATSON, Plymouth, Mass., more than 250 plants, from the avails of eight feeble runners that were scarcely alive when set out in my garden on the 28th of May last. This fact indicates a vigorous plant, and I shall look with interest for its habit of bearing, next July and August. R. G. PARDEE.—*Geneva, N. Y.*

[We expressed an opinion, some time ago, in the *Genesee Farmer*, that this strawberry might disappoint those who expected it would be a perpetual bearer in the north. We did this without doubting in the least the correctness of the statements made by Mr. LAWRENCE, whom we believe to be an honorable man, or by Mr. PARDEE, whom we know to be in every respect, a gentleman worthy of confidence. Our doubts arose from the fact that in the south, in such a climate as New Orleans, where strawberries blossom and bear in January, it requires no great art to make any variety bear for several months, because, as Mr. LAWRENCE says, "the runners bear the same season they strike." But we are informed that *the same identical plants of the Crescent continue to bear for seven months*. This is the point we wished to get at, as it gives us some hope of obtaining successive crops in the same season here. The question will be settled during the coming season. *Cremone perpetual*, that attracted some attention in Europe a year or two ago, proves *not* perpetual. Similar discoveries at various times have proved deceptive.—ED.]

SUMMER PRUNING OF HARDY GRAPES.—You would oblige a subscriber by giving, in your journal, some instruction in the management of hardy grape vines: particularly summer pruning. In your "*Fruit Garden*," you direct that the fruit branch be pinched off at the second eye beyond the fruit; but do not say at what period of the year this ought to be done. Some writers direct the fruit branch to be stopped when the fruit is half grown. At this stage, many branches of the *Catawba* grape have extended six to eight feet—too late to stop with any beneficial results. Would it be safe to stop the shoot as soon as the grapes form? If not, at what period of growth ought the branches to be stopped?

In the same work you recommend the spur system of pruning, and say little of the renewal system. My objection to the spur system in open culture, is the difficulty in keeping the vine clothed with fruit branches from the base to the top of the trellis, which may be done by always fruiting on new wood and cutting out, at the spring pruning, all wood which has borne fruit. Under this system, the vines appear clean and vigorous, produce fine fruit without so much danger of being over-cropped, and may be confined to a small space for years.

The best mode of spur pruning I have seen practiced, is to prune to a strong full eye,

whether three or more eyes from the main branch; disbud all the eyes between the eye pruned to and the eyes at the base of the shoot. When the eyes at the base break, rub off all except one, which train for bearing wood the following year, and prune to the strongest bud, as before. But the renewal system is more simple, requires less cutting, and is, perhaps, the best mode I have seen practiced for garden culture. C.—*Louisville, Ky.*

[The object of summer pruning is to prevent the growth of superfluous wood, injurious not only to the fruit but to the bearing canes for the following season. Its effectiveness depends in a great measure on its being done early; for if the surplus shoots, or parts of shoots, are allowed to lengthen and mature their wood, pruning can be of little service. It should be done while the shoots are young and soft, when a knife is not necessary. The bearing branch should be stopped as soon as it has made two joints beyond the fruit, the day of the month being regulated of course by the season and local climate.

Spur pruning we recommended with reference to the management of hardy grapes on trellises covering a large space.

The "renewal" is more applicable to vines kept in a small space, and trained to stakes. —Ed.]

FUNGI ON THE APPLE.—In a recent report made to the "American Pomological Society," at Philadelphia, I mentioned in regard to the apples grown in Western New York (in one vicinity at least) that they were generally fair, and free from spots or blotches. Much to my regret, I find that many of the best sorts are this season affected with black spots upon them, which not only are on the outer surface but impregnates the flesh of the fruit with a bitter and corrosive taste. It prevails very much, as before said, in the best varieties, and very few are exempt. I have an opinion that it is a disease which is produced in a great measure from the great neglect observable in most all the orchards, in the trees not being properly trimmed. Most all orchards are *too thickly* planted, for one thing; so much so, that such a density of foliage, when the trees are maturing their fruit, collects and retains moisture that neither the sun or air has sufficient effect to keep off what may truly be called a mildew of unhealthy and pernicious gangrene, which centers on the skin of the apples and very much injures them, both as regards appearance and quality. I feel so impressed with the importance of the proper pruning of trees, that I wish that a score of practical men were thoroughly versed in the matter and would offer their services to growers of fruit trees, who in turn, I should hope, would employ such ones to trim their trees. It is painful to see such neglect toward trees that might be renewed from year to year by judicious pruning, and the fruit kept good, if not grow better and better.

I merely throw out these ideas in hopes that you will deem it of importance to furnish what *you* think a preventive. A handsome and fair fruit is as beautiful as a fair and beautiful woman, but the blemishes which I have been speaking of, mars the original beauty which nature gave to the apple and caused it to be so tempting. J. H. WATTS.—*Rochester, N. Y.*

[The development of this parasitic fungus alluded to by Mr. WATTS, is due more, we apprehend, to atmospheric influences than to any defective pruning or management. We see it prevails in certain seasons and in certain localities much more than in others. It was scarcely seen in Western New York until a year or two ago, and it is quite probable that next season we may be again exempted from it. The remarks, however, in regard to pruning are none the less worthy of attention, for really there prevails a very great negligence in this particular branch of orchard culture.—Ed.]

A. J. DOWNING.—In reply to the call of Prof. TURNER, in our last, we have been kindly furnished with the following interesting reminiscences by the author of "*A visit to the House and Garden of A. J. Downing*," in our January number.

"It was in the winter of 1851-2 that the writer first saw Mr. DOWNING. Happening to be at a small party where he was among the guests, just when the circle was breaking up, I was saluted by a tall, somewhat grave gentleman, who, after an introduction, cordially and frankly invited me to his house in Newburgh, naming the day and thus leaving no doubt in my mind as to the sincerity of his intention. As he talked to me, I observed that his eyes were of a peculiar beauty, large, dark, and finely shaped, inspiring confidence by their steady glance and friendliness of expression. His hair was long and dark, falling on his forehead somewhat, and aiding the poetic character of his face. In his mouth lay the key to the secret of his success. Wide, and rather compressed, and not well opened in speaking, it expressed will and perseverance in no common degree and balanced the less stern and more flowing character of the upper portion of his face. His figure was slight and graceful; neat and precise in his dress, which was seldom of a lighter hue than black, his manners had a certain gravity and restraint through which a close observer could easily distinguish the possibilities of a large and generous humour. To all who are familiar with his writings, it is unnecessary to say that Mr. DOWNING's vein of humor and delicate sharp-cutting satire, was by no means the least of his gifts. These powers shone out in his conversation, which was rich and varied, and made him a welcome addition to the troupe of private theatre stars whose performances so often made his house ring with mirth. One of Mr. DOWNING's performances in this way, we well remember. It was a charade, which, about Christmas time, was keeping the cheerful fire and lights to make our hearts glad with

"Mirth that wrinkled Care derides,
And Laughter, holding both his sides."

"Mr. DOWNING's share in the acting was a discontented traveling Englishman, who is fighting his way through the grand tour, and doing his best to make himself and his companions as miserable as possible. No words can do justice to the manner in which he fretted and teased, nor the solemnity with which he received "the inextinguishable laughter" that shook his audience. His acting was natural, unexaggerated, and, like everything he did, perfectly unaffected. Even in these slight and apparently unimportant matters, he gave a stranger, such as I was then, the impression of a man who attempted nothing that he did not feel confident he could perform in the most complete manner.

"In dispensing the hospitalities of his house, Mr. DOWNING was free and generous; his time, of course, was largely occupied with his immediate business, and his absences were frequent. Once a month he went to Washington, and his visit there generally included other places, Baltimore, Philadelphia, Newport, and some others nearer home, where he was building houses, or laying out grounds. My first visit was made a few days before he left for his monthly journey, and as the weather was stormy, and he much occupied with indoor work, I saw but little of the arrangement of his garden, but I had a fine opportunity to learn something of the man. This is not the place, nor is it my object, to analyze Mr. DOWNING's character. Another pen will shortly give to the world a fitter and more complete account than I have power to write—a life of Mr. DOWNING, to which these feeble hints and sketches, with which our journals have long abounded, will serve but as preface and introduction.

"I reached Mr. DOWNING's house late in the evening. The winter had been unusually severe; the river was frozen to a greater extent than is at all common; the ferry had ceased plying, and loaded wagons, sleighs filled with passengers shrinking from the cutting blasts that streamed up and down between the mountains; and, beside these, hundreds of foot passengers crossed, thro' the day, over this apparently frail, but in reality secure, bridge of ice. At night the spectacle was grander but less enlivening. It was not with an entire freedom from anxiety that I found myself

for the first time upon the ice, half way between either shore, with the moon and stars above me, and no sound save the low blowing of the winter wind and the dismal booming of the cracking ice. Perhaps this feeling added zest to the pleasure with which, after a long walk, I found myself standing by Mr. DOWNING's fireside in his handsome and cheerful library. There may have been something in this, but it was not all the secret, for subsequent visits lost none of their attractions with the opening river and the greater ease of access."

"I must detain the reader a moment to speak of a conversation held on the night of my first visit, which has such a bearing on the character of whom I write, as not to be without its value. We were talking of fame, and of how far it is desirable, and I do not know through what eye paths of episode we came to speak of legends and fairy stories, but we found ourselves on that enchanted ground, and each of us in turn saying which of these stories had been his favorite in childhood. One of us preferred, before all others, the story in which a fairy gives to some mortal the choice of three wishes; and after due discussion, we began to indulge our fancy with supposing that each of us had the gift of such a choice, what would he choose? One of us chose unbounded wealth; another, troops of friends; another, to be perfectly good. I remember Mr. DOWNING's choice; it was for a character of magnetic influence that should draw all men to him as a friend and benefactor, that should open paths to him wherever he might walk and render him capable of infinite service to his fellow men. Without this, he said, wealth would be nothing, and fame cold—the shadow, and not the substance, of a happy life. After this, there followed a long discussion. I remember nothing of it; the voice, full, round, and clear, the sincere look, and earnest conviction of the man, abide with me to this hour."

"Mr. DOWNING thought, and somewhere, I doubt not, has expressed his feeling in this matter, that men in America are too much absorbed in business, and make it too unlovely. American men in cities, and those in the country who are not in the open air when at their work, labor from sunrise to sunset in ugly, dark, ill-ventilated rooms, stewing their minds over interminable rows of figures, and their bodies over unhealthy stoves, and so year after year until the day is past for the active enjoyment of their money, and the long abused body takes its fair revenge. Mr. DOWNING was industrious, no man more so; but he made a pleasure of business, and when he closed his office door at night he welcomed recreation as heartily as he did the graver duties of life.

"The winter passed away slowly and unwillingly. The river gradually dissolved its bridge of ice; the snow slid from the far off tops of Skunnymunk and Butler Hill; and the Fishkill Creek, a quiet rambling brook in the heart of summer, swelled and foamed with the freshets of spring, and went tumbling and roaring to the turbid river. When I had last seen Mr. DOWNING's garden, the veil which winter had thrown over her beauties when he married her, was unremoved. The trees were bare, the cedars and other evergreens were beautiful with their snowy fruitage, and, to my mind, fairer than when summer shows their green; but life, chilled by the winter winds and cloudy skies, had grown and bloomed within doors, where, like the plants in the neighboring green-house, she laid up store of health and strength to bear the more active duties of the coming summer. C. C.





12¾ feet high, 8¾ inches in diameter.



MAGNOLIA TRIPETALA.

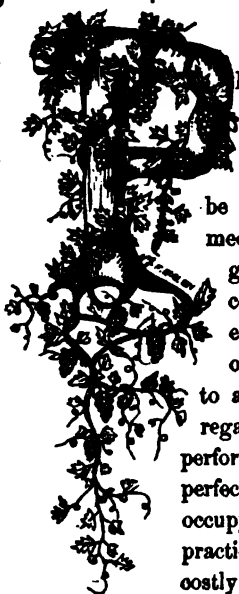
The three-petaled-flowered deciduous Magnolia.



1 *La Gitano.*
4 *Sylphide.*

2 *Criterion.*
5 *Asmodea.*
7 *Lupinus.*

3 *Wagnette.*
6 *Perfeta.*



PRUNING, properly considered, is one of the most important operations connected with the growth and management of trees and plants. That many do not so regard it, we have the most abundant evidence. Orchard pruning, which may be considered the simplest and plainest of all pruning—almost mechanical—is either so unskillfully done in general, or so neglected, that we feel safe in saying that the orchards of this country are diminished in value at least one-half. There are many erroneous notions in regard to this as well as other branches of culture, that must be abandoned before we can hope to attain to anything like a complete, profitable, or perfect system. Some regard pruning as merely a mechanical operation that any man may perform, and that in rare cases only is necessary. Their practice is in perfect keeping with this belief. Others, and among them some who occupy the position of teachers and expounders of the principles and practice of horticulture, speak of it as being merely a superfluous and costly refinement in cultivation, that people of leisure may indulge in for their amusement, but as being quite inconsistent with an economical and profitable course of culture. It is not a paying operation they say, and therefore it will pay best to let it alone.

How common it is to hear this argument of "it won't pay," raised against all improvement. It won't pay to drain, nor to fence, nor to plow deep, nor manure well; it won't pay to buy good stock at a good price, nor to provide them with good food and shelter and care; and so this excuse is offered for everything that is miserable in farming. It won't pay, say our city authorities, to make sewers and clean the streets and purify the atmosphere, and so disease is invited to waste the lives and interrupt the business of the people. Occasionally, however, an agriculturist more enlightened, more enterprising and daring than his neighbors, lays aside the popular notion, and drains and trenches and fences; buys the best breeds of animals, erects them good houses: and he grows rich; and if not rich, famous,—his name is passed around as a master spirit—a model farmer. So another city, under a more enlightened and liberal administration, adopts a thorough system of sewerage, and removes every source of impurity, regardless of the expense or of a clamorous opposition; and when epidemics prevail, it rejoices in health and uninterrupted prosperity, while death is causing dismay and desolation in others. Then it finds out that it pays to be cleanly. The notion that "it won't pay" to do everything *well*, is a great error.

But pruning, some say, is an unnatural operation, practised or recommended only by certain enthusiastic persons whose zeal has outrun their knowledge. That it is throwing difficulties and expenses in the way of cultivation that ought to be avoided, and that the less we practice it the better. Nature, they say, never prunes, and why should we? People who talk thus do not know what they say. To be consis-

tent, they must not only discard pruning, but budding, grafting, spade and hoe culture, and in fact the entire routine of operations which constitute our present advanced and comparatively perfect system of cultivation. Nature neither buds or grafts, nor hoes, nor spades, nor drains, nor manures. She does not make vine borders nor hot-beds, build vineries nor green-houses. These are unnatural operations, in the estimation of some people, inasmuch as they are not natural. It is right and proper that the cultivator should study nature well, for her laws cannot be violated with impunity; but it is his business to aid her by all the means which art and science has furnished him. Nature unaided does not produce *Black Hamburg* grapes, *Bartlett* pears, *Newtown Pippin* apples, nor *Early York* peaches; but she has given us the raw material from which to produce all of them, and she has indicated certain conditions necessary to their growth and improvement.

Nothing can appear more unnatural to the man who is ignorant of the principles of cultivation, than the common treatment of foreign grapes. They are not only furnished with unnatural supplies of food, but their pruning consists in cutting away annually three-fourths of their young wood. Now our *natural* cultivator might say that nature never intended the grape to be subjected to such treatment. But what sort of grapes would we produce without it? Fine fruits and beautiful trees and plants are not the spontaneous production of unaided nature, but require the intervention of a multitude of nice and skillful operations, which constitute the art of gardening. Neither do men arrive at a knowledge of these operations instinctively; they are not so perfectly plain and simple as to require no study, no teaching, no experience.

Those who think and write otherwise, only deceive themselves and others. The most simple mechanical art requires two or three years of an apprenticeship. A nail, a pin, or a shoe peg, are very simple objects—no mystery whatever about them; and yet men cannot instinctively become peg-makers, pin-makers, or nailers. A tree is a far more complicated piece of mechanism than any of these. It has an *organization* and a *life*. It is composed of a multitude of parts, each of which has its functions to fulfil, and all these parts bear certain relations to each other and to the life and growth of the whole tree, just as each of the various parts of the apparently complicated steam engine has a certain part to play, and is essential to the completeness and efficiency of the whole. A machinist is expected to know the name and particular purpose of every beam and bolt and screw of the engine which he constructs, but he is not expected to acquire that knowledge instinctively. He must exercise both his mind and his hands, he must think and read and practice for years, before he will dare call himself a machinist or an engineer. Trees have roots and rootlets, stems, branches, leaves and buds; all these are designated by certain names, and have distinct offices to perform in the process of vegetation and fruit bearing. Then there are different genera and species and varieties of trees and plants, all differing in certain habits of growth, and bearing and requiring different treatment as regards soil, culture, climate, &c. The *intelligent* cultivator must be familiar with the names and functions of all these parts, the peculiar structure, mode of growth and bearing of the

different genera and species and varieties; but will it come to him intuitively, any more than a knowledge of mechanics! Let those answer who have devoted a long life to the study and practice of field and garden culture, and find that at last they are but learners; and that if they were to live three times the ordinary life of man, they would be learners still.

We are not disposed to magnify the difficulties of cultivation, or to convey the impression that every man may not be a successful culturist; but we feel it our duty to the young, at least, to expose the fallacy of the teaching that cultivation is so plain and simple that "he that runs may read," and that those who inculcate the necessity of study and research, and of minute and careful operations, are mere "enthusiastic humbugs." Whoever gives ear to such absurdities, can never hope to attain eminence as a cultivator.

Pruning, as we said in the outset, is one of the most important operations connected with the culture and management of trees. It is an indispensable operation to a greater or less extent, from the moment when the seedling is taken from the seed bed, through all the phases of its development, until its existence as a living organized body terminates. What nurseryman transplants a stock into his nursery rows without pruning? And does he not prune his young trees at one and two and three or four years' growth, until they are ready for their final destination? Were it not for this constant annual or periodical care, a nursery would become an impenetrable jungle, and sensible men who wanted trees would avoid it as they would a pestilence. Then, who transplants trees into the garden or orchard without pruning? Roots and branches are necessarily submitted to this operation by every careful and skillful planter. Nor is it indispensable to trees alone, but to every shrub or plant that comes within the sphere of cultivation. What gardener can grow a respectable looking geranium, a rose, or a fuchsia, without pruning? What is it but the effects of pruning that distinguishes the magnificent specimens which figure at the exhibitions of Chiswick, from the tall, lean, mis-shapen deformities that have been left to *nature*, and that every man feels ashamed to own. There is no such thing in reality, as growing well-shaped, symmetrical trees and plants, and sustaining them in a vigorous and fruitful state, without pruning. But we must say, however, that necessary and useful though it be, we should greatly prefer to have it undone than done unskillfully. "The object of the pruner," says LINDLEY, (*Theory of Horticulture*), "is to diminish the number of leaves and branches; whence it may be understood how delicate are the operations he has to practice, and how thorough a knowledge he ought to possess of all the laws which regulate the organs of vegetation. If well-directed, pruning is one of the most useful, and if ill-directed, it is among the most mischievous operations that can take place upon a plant."

Every man of experience will endorse this statement. The pruner should know well what he does, and the precise reasons why he does it. Pruning is not lopping off a branch at random, as a man who walks in the dark, not knowing whether he is advancing on safe footing or about to step over a precipice. Every cut that a pruner makes upon a tree or plant, should be guided by a knowledge of the habits of growth,

and blossoming, and bearing of the subject, and have a well understood and determined object in view. A feeble tree and a vigorous tree must not be pruned alike, no more than an invalid should be served with the same food, and urged to the same labor as a man in full health. An apple and a pear tree that produce their fruit only (with rare exception) on wood of three years old and upwards, cannot be pruned in the same way as a peach or a nectarine that bears principally on wood of one season's growth. The grape, the currant, the raspberry, the quince, the filbert, and the fig, have each a peculiar mode of growth and of bearing, and the pruning applied to them must be based upon an accurate knowledge of this. Even in the same species, a prolific variety must not be pruned in the same way as a shy bearer. The cultivator of ornamental plants knows how necessary it is to understand the mode of flowering of plants, in order to prune them well. In roses, for instance, all the perpetual bloomers produce their blossoms on young wood of the current season's growth, while the summer roses generally produce their blossoms or blossom shoots from wood of the preceding year.

Pruning becomes plain and simple when these principles are studied, and instead of being a superfluous, expensive, or unnatural operation, is one of the most useful, interesting, and beautiful, enabling us to exercise a perfect control over the forms and fruitfulness of our trees, and to adapt them to every circumstance and condition that fancy or interest may dictate. There is certainly no branch of culture so inviting to gentlemen who love their gardens and their trees, and desire to participate in their management. It is a pleasant exercise for both body and mind, and its practice not only awakens increased interest in regard to the trees themselves, but throws a new light and suggests new inquiries on the whole subject of vegetation.

THE POMPONE OR DAISY CHRYSANTHEMUMS.*

THE introduction of the Pompone Chrysanthemum, or Chusan Daisy, from China, by Mr. FORBURN, some seven years ago, gave quite a new impulse to the culture of this flower, and completely re-established its claims to popular favor. We have now chrysanthemum growers, catalogues, exhibitions, books and essays, and the world-renowned dahlia itself can scarcely boast of a greater popularity than do these modest, charming daisy chrysanthemums. They are certainly a great improvement on the old, large-flowered Indian varieties. The plants are so compact in their growth, so profuse in their blossoms, the flowers are so regular, and the colors so brilliant and so varied, the foliage thick, and the entire plant and its flowers so miniature-like, that they strike the eye at once by their novelty and beauty. They are easily propagated and grown, and we may expect that every garden and green-house will include them among their autumnal ornaments. Considering that it is only a few years since they were introduced they have been pretty widely disseminated, and the varieties greatly increased. Every season brings out a collection of novelties.

* See Frontispiece.

Several French florists have taken them up as *specialities*, and are exercising all their ingenuity in producing novel combinations of color. In England, too, they are receiving much attention, and a few very good varieties have been produced there.

One of our plates for this month is a bouquet composed of seven varieties, which have been introduced long enough to have become quite plentiful and easily obtained.

1. *La Gitano*.—Pure white, becomes tinted with rose as it fades. Form regular and fine.

2. *Criterion*.—Clear bright yellow, outside petals slightly marked with red. Flower rather above average size, fine form. A free, excellent bloomer.

3. *Mignonette*.—Small, remarkably regular and daisy-like. Color yellow, deeply tipped with brownish red.

4. *Sylphide*.—Pure white, slightly yellowish in the centre, and is lightly tinged with rose on the edges when fading. Form remarkably compact and regular.

5. *Asmodea*.—Brownish red on an orange yellow ground. A distinct and showy variety.

6. *Perfecta*, or *Perfection*.—Purplish lilac. Form regular and beautiful. Blooms in large clusters. The best we have seen of this color.

7. *Daphnis*.—Deep purplish rose, bordering on crimson. A rich color, and a free blooming, excellent variety. Quite distinct.

(Perhaps we ought to add here that the flowers from which our artist made his drawing were taken from plants rather past their prime, and they had a journey of two days to perform before they reached him. Still he has given us a very accurate picture, without the slightest possible exaggeration, unlike the unnatural, mathematical drawings we have seen in some of the foreign magazines.)

8. *Automne*.—Buff, with a shade of salmon; rather a dull color, but distinct, and a good shape.

9. *Henriette*. (Chauvier).—White, with a delicate rosy tinge. Fine form.

10. *Elegante*.—Blush, with a rosy tinge.

11. *Valeda*.—Creamy white. Fine form.

12. *Nimon*.—White. Flowers small, very regular and pretty.

13. *Circe*.—Rosy blush.

14. *Eliza Mielliez*.—Pale rose. Regular and finely formed.

15. *La Sapajou*.—Deep yellow, edged with crimson. Open centre. Quite distinct.

16. *Le Jongleur*.—Bright golden yellow. Globular and regular.

17. *La Fiancee*.—Pure white. Very good.

18. *Piquille*.—Rosy crimson; a rich fine color.

19. *Matricarioides*.—Very small, not more than one-fourth of an inch in diameter. Pale pink.

20. *Omnium minimum*.—The smallest of all. Lemon white.

These twenty varieties make a fine collection, giving a great variety of form and color. We might add others worthy of attention. Some new ones we have not seen, are highly commended, among which are *Sacramento* and *Solfatare*, both yellow. At the English floricultural shows last autumn, the competition among the

growers of these pompones was very active, and attracted unusual attention. In looking over the reports, we find that, with a few others, the varieties we have named were the most successful.

The chrysanthemum is a flower of the easiest cultivation. Whether in the open ground or in pots, every person who desires, may bring it to a very satisfactory state of perfection. Cuttings root in a sandy soil in a couple of weeks, where there is a temperature of 60° or 70°. If struck in March, and potted in small pint pots, they will be ready to turn into the border in May. The soil should be dry, deep and rich. Proper attention must be given them during the season, in the way of pinching, to make them bushy; and watering in a dry time. The plants must not be crowded together, but have plenty of space to admit air and light freely around them. In localities where October and part of November passes without a heavy frost, they will make a fine show.

Pot-culture consists in making a succession of shifts from smaller to larger pots, as they become filled with roots; in pinching at proper intervals, to regulate the form; (the pompones are not so difficult to keep in good shape as the old sorts;) in watering abundantly and regularly; and in keeping them well exposed to the sun and air. The usual practice is to plunge them in a dry border after the first shift; take them up and re-pot in June and July; plunge again in the border and let them remain till about the first of October, when the blossom buds will be well set. They are then moved to the stage in the green-house or window, light and air freely admitted to them, and a regular and abundant supply of water given. With this attention they will afford a fine display of flowers till Christmas or later. Either in open ground or pot-culture, frequent renewal of the plants is necessary. Young plants are much better than old ones, and therefore a stock should be propagated annually either by division of the roots or by cuttings. We ought to add that some of the pompones bloom earlier than the large sorts, and are equally as hardy.

LAWN TREES.

AMONG the multitude of trees which are suitable for the embellishment of lawns, the MAGNOLIAS are justly entitled to the highest rank. In Europe, whether we look in the little plot of the cottage or the broad parks and pleasure grounds of the nobility, we find them among the rarest, most costly, and most cherished ornaments. Even where the climate will not allow their culture on the lawn, they are still indispensable, and are grown under glass, as we grow camellias. Fortunately the finest of them are natives of our own soil, and several species and varieties, making in all a handsome collection, are so hardy as to flourish in almost every part of the United States. The nurseries of this country, and especially those of Flushing, have for many years propagated and sold vast numbers of the more hardy species, and yet the specimens that we find around the country are few and far between. One great reason is they

are exceedingly difficult to transplant. We think we are safe in saying that for every one hundred that have been planted, not more than ten are in existence. They are difficult to propagate, also. Seeds are always scarce and dear, and it takes several years to make a respectable sized tree. Planters are in the habit of committing a great error in regard to this, as well as many other trees. They are not satisfied to plant young specimens that would involve little risk; they must have them large—large enough to figure at once on the lawn with other trees—and therefore they fail with their magnolias much more frequently than they succeed; and that, too, after they have paid the nurseryman a good round price. We must say candidly, to those who wish to plant successfully, that they must come to this. They must either take small plants, say one or two year transplanted seedlings, of such as are raised from seed, or pay the nurserymen for raising good specimens in pots. From what experience we have, this would be our course. The spirit of impatience must abate before we really set on the right course in regard to planting. The cry has been to a great extent, and is so at present, “we want large trees—trees that will grow up rapidly and produce an immediate effect!” This spirit has filled the country with the coarsest and most unsuitable trees that could possibly be selected for the purpose of embellishment. It has scattered broad-cast abeles and ailantus, and whatever else promised the greatest amount of shade in the shortest given time. The mistake begins to be felt, and thousands of vain regrets are daily uttered. All manner of hard things are said about the rapid growing trees, and they are threatened with nothing less than extermination. It should be remembered that they have been merely misapplied. There are situations and circumstances in which the judicious planter may use such trees to advantage. There are bleak exposed situations, where the very first object of the planter is to provide *shelter*, because this is no less indispensable to that comfort which every wise man seeks in his residence, than to the success of his cultivation. In such cases the most rapid growing trees are needed, and it would only be absurd to plant others. But such a plantation would be made on the outskirts of the grounds, and on the principle of utility,—not on the lawn or in the door yard, or wherever it may be desirable and necessary to display taste and beauty.

Among our hardy American deciduous species of magnolia, the *acuminata* (cucumber tree,) is much the largest; specimens from sixty to eighty feet in height may yet be found in the scattering remains of the forests of New York, and especially southward towards the Alleghanies. MICHAUX says: “It abounds along the whole mountainous tract of the Alleghanies to their termination in Georgia, over a distance of nine hundred miles. The situations particularly adapted to its growth are the declivities of mountains, narrow vallies, and the banks of torrents, where the air is constantly moist, and the soil deep and fertile.” When this tree is transplanted at an early age to the lawn, where it has abundant space on all sides to assume its natural habits of growth, it throws out side branches near the ground, takes a pyramidal form, and tapers upwards with striking regularity and symmetry. In this way only is its real magnificence developed. Its leaves are large,—and especially where the

trees are young and growing in a rich, deep soil,—varying from six to ten inches long and four to six wide. The flowers, which appear in May or June, are three to four inches in diameter, of a bluish purple color on a dull white ground. This tree is usually propagated from seed. The nurserymen who propagate it extensively, sow the seeds in beds of light mellow soil in the open ground. Those who propagate it on a less extensive scale will find it quite as convenient to sow the seed in a shallow box of light earth. At one year's growth the seedlings may be transplanted into nursery rows. They re-root slowly, and it is not until two years' growth after transplanting that they make a rapid, vigorous growth.

The *Magnolia tripetala*,* (three-petaled magnolia, or umbrella tree,) is much smaller than the preceding, and better adapted to planting on a small lawn or limited grounds. MICHAUX regards it as a "connecting link between the larger shrubs and trees of the third order, rarely attaining thirty or thirty-five feet in height, and five or six inches in diameter. The leaves are very large—twelve to twenty inches long, and six to eight broad. The flowers are produced on the points of the branches—very large, some six to eight inches in diameter, and composed of three large, loose petals. The chief beauty of this species consists in its magnificent foliage, the most tropical like, excepting the *M. macrophylla*, of all our hardy trees. There is also a certain beauty in its large flowers, and in the fruit, which is in the form of a pine cone—five or six inches long, and two or three in diameter. The tree, however, in its form has little elegance, often inclining to one side and throwing up a succession of vigorous shoots from the lower part. A specimen nine or ten years planted, in our grounds, has divided near the ground into three main branches. These divide again further up. The main branches are about three to four inches in diameter, and the whole ten feet high. It has blossomed for several years. It blossoms young, seeds freely, and is usually propagated and managed as described for the *acuminata*.

The *Magnolia macrophylla*, or broad-leaved, is a very striking and beautiful tree, and the rarest of all the deciduous American species. It is distinguished at once from the preceding by its large leaves—which are light green above and glaucous beneath,—its light grayish bark, and silky buds. It is propagated as the two preceding, from seeds; but they are difficult to get.

The *cordata*, or heart-leaved, is also a fine species from Carolina or Georgia, with flowers of a yellowish tinge, produced twice during the season. Hardy in the Middle States.

The *auriculata*, or long-leaved, resembles the *acuminata*; but it does not attain so large a size, and is distinguished by the leaves being distinctly lobed at the base. The flowers are white.

The *conspicua*, or chandelier magnolia, is a beautiful Chinese species, quite hardy in the Middle States, and regarded as one of the most charming of small sized lawn trees. It branches low, and forms a symmetrical half shrub half tree, covered in spring before the leaves, with milk white flowers. One of the finest specimens we have seen in this country, is that on the grounds of the late Mr. DOWNING, alluded

* See plate copied from LONDON'S "Arboretum Britannicum."

to in the description of his grounds in the January number. It is propagated from seeds, but more generally by layers which require two years to root; or by grafting or inarching on some plentiful sort.

The *obovata*, or *purpurea*, another Chinese species, is necessarily classed among shrubs, as it seldom attains over ten feet in height, and not often that. It bears its flowers, which are purple on a light ground, before the leaves in the spring, and is at that season highly attractive. It is easier propagated from layers than the *conspicua*, and is therefore usually more plentiful and cheaper in the nurseries.

The *soulangeana*, is a variety produced by crossing the two preceding. It resembles the *conspicua*, but differs in having the flowers tinged with purple. It is a hardy, profuse blooming, beautiful small tree. Propagated generally by grafting or inarching.

The *gracilis* is a slender, erect growing shrub, resembling the *purpurea*, differing particularly in the branches being more erect and slender.

The *glauca*, or swamp laurel, which abounds in New Jersey, and in low, swampy grounds further south, is a very pretty small tree, with glaucous leaves and white, sweet scented flowers. It does not succeed so well in dry exposed places as those previously mentioned, but its great beauty entitles it to some extra care in the way of soil, shade and shelter.

There are many varieties which have sprung up accidentally from seeds, both of the American and Chinese species, but they differ only in some minor points from those described.

TREES FOR STREETS, AND THEIR PROTECTION.

BY WILLIAM BACON, RICHMOND, MASS.

IN your January number of the *Horticulturist*, you make some very appropriate remarks on the proper varieties of trees for street culture. As this is a subject in which every lover of rural improvement and fine scenery and pleasant thoroughfares must feel an interest, I have concluded that a little more may be said upon it, without loss of time or influence.

It is now some years since I commenced planting trees by the way-side. In my first effort I was guided more by popular opinion than by what I now consider a correct taste. The maple was all the rage in those days, as it is with many now; so in the outset I went the whole figure for the maple, which, when it grows unrestrained, is certainly a very beautiful tree. Yet it has one serious objection; it early loses the freshness of its verdure, and its leaves acquire a thick, dry, leathery, dead appearance. Not so with the elm, whose verdure remains beautiful to the last,—not so with most of the trees of our forests; and if I were to plant over again, and plant merely for shade and beauty, I should be sparing of maples. Indeed, if our soil would permit variety, I would never confine myself to any one, or even half a dozen species; variety

would be what I should seek, and contrast what I should most particularly study. If I gave preference to any one tree, it would be the elm—at home in almost every variety of soil, especially moist soils. Beside other trees it always gives an agreeable contrast, and impresses one with the dignity to which the trees of the forest may attain.

I have planted out the oak, and have no reason to complain of the tardiness of its growth. Its majesty by the side of the ever graceful elm always presents an agreeable feature; and while the former is early in putting forth its leaf, the latter is tardy in heeding the call of spring. So in autumn; when one has cast its leaves to the freshening blast, the oak retains its foliage, and dressing in new colors every day as the season of the sear and many-colored leaf passes on, it smiles at its own decay, and lays the dress of summer in gorgeous array upon the earth. I would by all means have the oak occasionally scattered by the way-side, as one of its choicest ornaments.

The American chestnut is a tree whose merits have never been fully appreciated. As valuable as it may be to split into rails, burn for charcoal, or apply to any other economic purpose connected with the dollar, it nevertheless has strong claims as an ornamental tree. It is of rapid growth and beautiful form. There is much of the beauty and strength of manliness in its fine and wide spreading branches. Its foliage comes out late, and like that of the oak, remains late. Its beautiful white blossoms, which come out long after the blossoming season of other trees, contrasting with the rich, deep greenness of its foliage, make it conspicuous among other trees of the wood, and its curious burrs add to the loveliness of its autumnal richness. This tree retains its foliage in freshness often until the most of the trees of the forest have cast off their drapery. In the variety which should always be introduced in street planting, it should always have a prominent position.

The hickory is a tree of unquestionable beauty. Its fine head, rich verdure, firm trunk, which in youth exhibits the maturity of age, are all commendations in its favor; but it is a tree of slow growth, and in no wise adapted to every soil, like some trees—qualities which must prevent its general cultivation. Yet, in a favorable soil, it would with me be a favorite tree, thrown into some position where its slow growth would give it loveliness. I have seen way-side trees of the hickory which were amply large enough, and that possessed enough of beauty to make them fascinating.

In fact, we know of no tree of our forests that, left to the free growth of nature, would not make a respectable growth by the way-side; and if the planters of trees, instead of following the old stereotyped practice of setting out all maples, all elms, or all locusts, would introduce such varieties as soil will admit to grow freely, and circumstances will favor their obtaining, so that no two trees of the same variety shall stand together, but those of different foliage and habits become neighbors; there would, we are sure, be greater beauty in the graceful rows of street trees, coming forward at the bidding of nature, than we can at present anticipate. The eye, as we passed along, would continually be feasted with new objects, often so opposite in their characters as to savor the visions of romance, and lead us to suppose we were really passing through fairy-land—just such a land as every one should be ambitious to

make, in our sweet realm of freedom, where refined taste and persevering industry are allowed to exert their utmost influence.

There is a great error existing in planting out trees, which may very properly be mentioned in connection with the remarks already made. It is, planting them without reference to their adaptation to soil. That every tree has its favorite soil, in which it will flourish better than in any other, is very certain. Many trees will flourish only in a warm, dry soil; yet how often have we seen such trees, because public opinion pronounced them beautiful, taken from their warm, dry homes, and thrust into cold, wet, clammy earth, where their roots had but little more chance to throw themselves than if they had been planted on a rock, and where all the aliment introduced into their system was so opposite to what nature required, as the most conflicting circumstances could induce. Can it be any wonder that trees die, or at most maintain but a sickly growth under such circumstances? In vain we have remonstrated and employed our eloquence in giving reasons of protest against such proceedings. Our only consolation was, "The —— is the most beautiful tree; it grows well in such a place, and I am sure it is dry enough for it here." And how often a short time has realized the truth of our assertion, and we have heard in apology, "It's of no use to set trees here; they won't do well."

Now it is a fact in nature, that forest trees will succeed better, especially after the first year, (which they may live through under adverse circumstances,) when removed from a moist or wet soil to a dry one, than the reverse. The maple, oak, birch, or chestnut, will not grow well in lands containing over a given amount of moisture, and this must arise from other than stagnant waters; yet the larch, black ash, and other trees, which may almost be said to spring out of stagnant pools, if removed to uplands, will live and grow and flourish to a good old age;—considerations which are certainly worth the notice of those who plant trees.

When will the provoking, unnecessary, unjust practice of street feeding have an end? This is a question that very often urges itself upon our consideration; and the more frequently it comes up, and the longer we suffer our minds to dwell upon it, the more fully we are convinced of its utter wrongfulness, as it respects the rights both moral and civil with which we are endowed, as well as the sad deficiency of good taste which leads to its practice.

We have often lifted our voice, and sometimes wielded (too feebly, we admit) the pen upon this subject, and as a prime argument in its favor, have been told that by abolishing the practice we should oppress the poor, who had no other way of keeping a cow or a pig through the summer season. Then we looked upon the herds of lawless marauders which were continually promenading the streets in search of a green to defile, a newly planted tree to rub against, or a weak spot in the fence through which they could lay siege by night time on a neighbor's grain field, and lo! the poor man's cow was not there. These pilferers in the main belonged to men of substantial real estate, who, to plow or mow more, must pasture less, and consequently intrude upon their neighbors' rights. Then, we have met the poor man, who had not a foot of ground to call his own, and asked of him the profit of feeding streets. He

did not know ; it was cheaper for him, from the earnings of his daily labor, to hire his cow pastured, so she might be safe from accident, and when the labors of the day were ended, and fatigue bore down his frame, he should know where to find her.

So we see that this vile and *bestly* practice does not arise from philanthropy to the poor, but is a device of narrow-minded, selfish men, got up and sustained for personal interest, in opposition to public good.

We have introduced this subject now, more particularly for the bearing it has on tree culture along our waysides. In charity we suppose there is not an individual in all our wide land who does not look upon a beautiful tree as an object fit to please the eye and elevate the soul. We cannot think that in our land of taste, education, and refinement, there is a soul so dull as not to appreciate the beauties of a lovely avenue, opening in new beauties at each angle of the street, presenting pleasing varieties of form and features, as varying circumstances prompt to their development. And how many are there, even of those who have no wayside lands to ornament, who would gladly contribute to carry out the plan of loveliness that would transform *all* our highways into beautiful avenues, if they could be assured that their labor would not be in vain ! "I admire trees by the way-side, and would gladly plant them out if I could be assured of their success ; but, as certainly as I plant one in the highway, it is rubbed down by cattle, or rooted up by hogs," is an expression in no way unfamiliar to our ears.

But allowing trees to live and even grow under these circumstances, they do so in a very objectionable manner. By being frequently rubbed against, the pores of the bark become closed, so that their health-giving functions cannot be performed ; the tree becomes sickly, stunted in growth, so that a full and vigorous development cannot take place ; disease which must result in death, soon shows itself in the premature fading of the foliage ; the branches die off and fall from their places ; decay fixes its throne in the heart, and though external appearances may dictate to the contrary, it works with vigorous and unremitting energy within, until its work is complete, and a blast from boreas prostrates to the earth, what was designed as a monument of beauty and taste.

Again, were this pernicious practice abandoned, other improvements in our streets might safely be ventured upon. Clumps of roses, or other beautiful plants might safely be planted at appropriate distances, without loss of land, even if the land devoted to such objects is ever lost, which we very much doubt, to perfume the air with fragrance, and feast the eye of the traveler with objects of beauty and the mind with pleasing reflections. What a beautiful and attractive country that would be, where the thoroughfares were inviting avenues, fanned by cool and refreshing breezes and perfumed by flowers as sweet as those that gave their fragrance to the morning air of Eden ! A great contrast, truly, to our highways, rooted up to a harvest of weeds, filled with animals, the very sight of which is justly a terror to nerveless females and children, whose power of protection is too feeble to shield them from the dangers to which they are constantly exposed.

And may we not anticipate the day when changes like these shall be fully realized ?

If not, there must be an end to human progress before its object is accomplished.—Civilization and refinement must proclaim their work finished before their grand ultimatum is realized. Taste must be satisfied to leave her work undone. The sons of earth must conclude that deformity is pleasant to the eye and improving to the mind, and that the Eden created for man was not the paradise suited to his ambition, but scenes lower, prospects more dim, and enjoyments less attractive, are more congenial to the aspirations of his mind, than those which his Creator, in love and kindness provided for him.

I have further sayings to utter, on streets and street trees, of which the above are but introductory. A wrong and wasteful taste has prevailed on this subject—a taste which had no reference to circumstances. We have yet a great deal to do to get the world right in rural matters. Patience and perseverance under a constant train of discouragements can alone effect the object. Let us go forward in all the strength a righteous cause can give, and though we have frequent discouragements, we shall triumph at last.

WHAT IS CULTIVATION?

BY WM. W. VALE, M. D., FLUSHING.

WE like to see a garden *well* laid out and cultivated. There is something in the contemplation of its design, the harmony of its parts, and the neatness and skill with which it is kept up, that affords a peculiar kind of gratification to every true lover of the beautiful in art or nature. But *all* gardens are *not* well cultivated. Some have no design, and are but a heterogeneous aggregate of an absurd and preposterous fancy,—expensive it may be, but nothing more. No one portion of them is in keeping with another, though every walk and bed is scrupulously clean—this is the gardener's pride, and he "lays himself out on it" with perfect composure; for *his* knowledge of what a garden ought to be, "hath this extent, no more." Again we see design, and a certain harmony in every department, but the whole lacks that great essential, *taste*—the combination of all the elements embraced in location and surface, developed with sound and discriminative judgment. A flat surface and straight lines in the walks, the trees, the shrubbery, form the ultimatum of many gardeners' ambition, and they will take infinite pains to destroy every natural beauty, in order to accomplish this most undesirable and monotonous object.

But we did not set out to speak so much of tasteful designs, and the laying out of gardens, as of their being well cultivated. The divisions of them may be round or square, or oval, or of any shape or size, the surface flat or undulating, the soil poor or rich, sandy or loamy, the advantages of location and aspect good or bad, yet the question comes at last, is the garden *cultivated* with skill, and according to the best lights of scientific horticulture? What is cultivation? To the man of science there is but *one* answer to this question; with the superficial and illiterate there are many, and scarcely any two of these shall agree in their definition. One man removes the

wild strawberry from the woods and plants it in his garden. With him this is cultivation—a mere change of place—the soil, most likely, being less suited to its growth than that from which it was transplanted. Upon this principle, whatever is in the garden is in a state of cultivation, and for no better reason than because the common operations of hoeing, digging, weeding and raking are performed therein. True, these are parts of a whole in making up a complete system of culture, but they are not the system itself, and if nothing more were required or done, vegetation would ultimately languish, and become essentially retrograde.

Another gardener (and there are many such) transplants a small tree from a hedge to one of his garden plots. He knows just enough of vegetable physiology to reduce the head and branches somewhat, and to keep the tree exact and steady, to facilitate its rooting. This accomplished, the tree has (to him) been brought into a state of cultivation, and he expects it to grow and flourish far more rapidly and certainly than if it had been permitted to stand where it originally sprung from the earth. If it does not fulfil his expectations, the fault lay in the tree, and not in any act of omission on his part, by which the cultivation of it should have been perfected. Such a gardener knows (generally speaking,) just enough to be quite at his ease in the performance of certain duties pertaining to his calling, and to render him obstinate in receiving further enlightenment from his employer or any body else. There are such men as we very well know, capital operators with the hoe, the spade, and the rake, doing well what the hands alone may do, but without the mind and skill to give them the only proper direction. Cultivation *has* a meaning with them, but it is very remote from the truth, and limited to certain acts of a purely mechanical nature. There are grades of intelligence among gardeners, and we have commenced our illustrations with the lowest. Let us pass on to a more enlightened class, and see what *they* understand by the term cultivation.

If one of these men is asked for the meaning he attaches to that process by which he brings to perfection a tree, a shrub, or a vegetable, he will very properly reply that their *cultivation* embraces a knowledge of soils, temperature, light, moisture or dryness, and the application of manures. By their aid, and the use of certain implements, he adapts means to their proper ends, because he knows their relative value. By reading, reflection, observation, and diligent practice, the mind has become prepared for the reception of the truths of vegetable physiology, and by a practical application of them to the circumstances under which the tree, shrub, or vegetable is made to grow, he *cultivates* them as their several necessities require. This brings perfection if it is at all attainable, and the result is based upon sound and discriminative intelligence.

There is no such thing as a royal road to perfection in arranging and planting a garden. But one would be induced to believe it an easy matter to do either, were the opinion formed upon the illustrations met with every where of the capacity and judgment of most of the gardeners employed in the United States. There are some *intelligent* men among the number, but the larger portion are of an inferior caste, practical *workers* truly, but not men of reflection, not the men who read and reason, and base their operations upon the scientific elucidations of a progressive age, preg-

nant in great issues to the horticulturist as well as the mechanic and professional man. We want that class of assistants in our gardening pursuits, who eschew that dogged obstinacy so inseparable from superficial knowledge. We want the men, who having come *from* Europe, will remember that they *are* in America, and that the soil and *climate* bear an important influence in controlling and modifying the least of their operations.

DISEASES OF EVERGREENS.

BY H. W. SARGENT, FISHKILL LANDING.

I INCLOSE you a few leaves of the white pine, covered more or less, as you will perceive, with eggs of what I take to be the "American Blight," as they call it in England. If not this, it is an insect very much resembling it, and attacking in its perfect state principally the axils of the limbs and branches, though being more or less scattered over the tree. I have observed for several years, that our larches and pines, and particularly the Scotch fir, are apt to be very much infested with these troublesome insects early in June, confining themselves principally to the trunks and branches on the pines and firs, but upon the larches scattered indiscriminately over the foliage, and more especially attacking the young wood. By August the insects upon the larch generally disappear, probably wafted by the wind and the pendulous motion of the branches, and disseminated like the seeds of the dandelion and thistle. Those upon the pines and firs, however, seem to remain the year through, resting quietly upon the trunk, and principally at the axils of the limbs. The difference in the action of the insect upon the pine and larch, is that when they disappear upon the latter, there is no trace of them (beyond the enfeebled growth of the tree) until they suddenly make their re-appearance in June; whereas, upon the pines they seem to hang about all winter in a listless, indifferent state, while the leaves of badly affected trees are more or less covered with their eggs, as is the case with the leaves I enclose.

I should be glad to know, in the first place, what becomes of the insect from August to June, when it re-appears upon the larch. As it has but little or no power of locomotion, as it appears, beyond the wafting about by the wind, one can hardly account for its sudden re-appearance. Secondly, I should be glad to know if there is any feasible method of controlling an enemy which, if he goes on progressing in numbers and force, will soon destroy many of our valuable evergreens. In Scotland, I understand, the disease has proved so formidable as to have entirely destroyed several thousand acres of larch and fir plantation, upon the estate of the Duke of Athol; and I find that I have already lost several pines and Scotch firs from this most perplexing enemy.

You may imagine how impossible it is to attack this disease in the shape in which I send it to you—each leaf upon a large pine surrounded by several nests of eggs. When in the spring they assume the shape of the woolly aphis, or American blight, it

is possible to subdue it by a preparation of sulphuric acid, in the proportion of $\frac{1}{4}$ oz. acid to $7\frac{1}{2}$ oz. water, scattered through a garden engine over the foliage: but this is not very effectual, unless when thoroughly done; and then when thoroughly done, is very apt to destroy, or very much deface the tree, especially if young.

Perhaps some of your readers more fortunate than myself, may have discovered some method less dangerous, and more effectual, for subduing this enemy. If not, I very much fear, (at least in our part of the country,) that in a few years we shall know the white pine and scotch larch only by name and recollection. More than this, I do not see why all the new pines will not be similarly affected. The Piceas and Abies seem exempt so far, though I am sorry to find the Deodar cedar is apt to lose its leader every summer, from the attacks of the pine weevil. At Messrs. PARSONS' Nursery, Flushing, that fine avenue of Deodars just commenced, had their leaders all more or less cut up by this destructive insect. My Deodars are also more or less attacked every year in June, by another enemy—a beetle—which gnaws patches the size of a sixpence on the trunk and principal limbs. I have found dusting the tree with sulphur, though not particularly becoming to an evergreen, efficacious in repelling the attacks of this beetle.

I have examined carefully the pines and larches of my neighbors upon the river, and find them more or less affected—those places the worst where the Scotch larch abounds, which would confirm what my lamented friend Mr. DOWNING used to say, that it was a disease that made its appearance in this country within the last ten or twelve years, and is now being scattered through it, from the large importations of Scotch firs and larches, and from these has been communicated to that fine evergreen, our white pine. If it proves fatal in Scotland, why should it not here! In fact it has, in my own case, in several instances. I should be very glad if some one interested in this most important branch of ornamental planting, the evergreen family, would take the subject in hand, and devise some ways and means of protection.

THE CLINTON GRAPE.

BY G. E. ROCHESTER, N. Y.

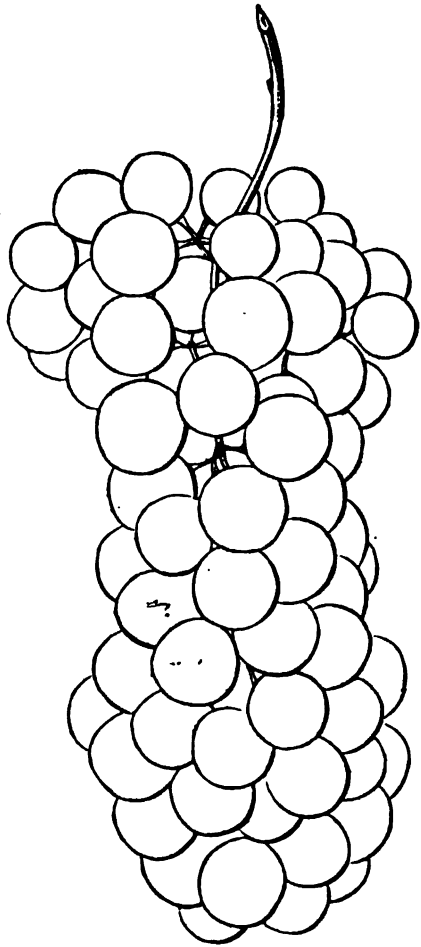
I HAVE now before me (January 25th) a bunch of the above desirable, long-keeping variety, as fresh and perfect as it came from the vine. It has been cultivated in the vicinity of Rochester for the last twenty or twenty-five years; yet it is still but little known, although well worthy of a more general cultivation on account of its hardiness and productiveness. It is *the* grape for the north, where no other variety ripens. Even with us, (latitude 42°), in backward seasons this is the only variety that attains complete maturity. I would particularly recommend it to wine-makers as worthy of trial. My opinion is, that before many years it will be extensively cultivated as a wine grape. Judging from the character of its juice, the wine will require a longer time to ripen than that of *Isabella* and *Catawba*, and will keep much longer than

either. It succeeds well in all dry situations, and is entirely free from *rot*, to which the *Catawba* is particularly subject.

It is a matter of surprise that the wine-makers of the west, some of whom have been making such active search for native grapes, have not turned their attention to this variety. I have not seen it mentioned in any of their reports. I am informed, however, that it is now in the course of being tested there, and that a quantity of the grapes have been sent from this place to an eminent wine-maker, to be tested as to their wine-producing qualities. We may therefore expect a report soon.

The vine grows rapidly, and is propagated easily, striking more readily from cuttings than any other variety I know in the whole catalogue of popular native and foreign sorts. The shoots are slender and wiry, ripening so well as to acquire great firmness, and hence it is so hardy that the severe cold of a northern winter never affects even the softest parts of the young shoots.

Wood—grayish brown, and short-jointed. Leaves—small and thin, sharply serrated, and, unlike *Isabella* and *Catawba*, which are usually turned backwards, they have more of a concave form. Bunches—small and compact, resembling much the *Black Cluster*. Berries—small to medium, black, juicy, with considerable pulp, rather acid when first gathered even though ripe. They improve by keeping, just as winter pears will by house-ripening. It is a prodigious bearer, and ripens in equal situations two or three weeks before the *Isabella*.



CLINTON GRAPE.



WHITE MUSCAT OF ALEXANDRIA GRAPE.

BY A. MESSER, GENEVA.

I WAS pleased to see the question raised concerning the *White Muscat of Alexandria*, in your last number, (page 98.) I hope some of your correspondents who have had a long and satisfactory experience, will answer it. In the meantime, I will tell what I know on the subject. I have a few of the foreign varieties of the grape, planted three years ago; and last year I enlarged the house, and set out more. Among the oldest is one *White Muscat of Alexandria*, bought of PARSONS & Co. Last summer it bore, for the first time, four clusters of beautiful grapes. I had formerly been doubtful of the success of this kind, especially as Mr. DOWNING has said "that it will scarcely attain its highest flavor without fire heat." As it started later than the *Hamburg* and *Chasselas*, some old sash were laid on the outside border, which caused it to operate like a hot-bed. This precaution had a decided influence in accelerating the flow of the sap. The house was kept as close and warm as possible, by which means the temperature of the roots in the *outside* and *inside* border was rendered equal. This I think to be an important consideration, and Professor LINDLEY makes the same suggestion, in his *Theory of Horticulture*. On some of the hottest days in July and August, I would remove the sash in day time, but return it at evening, and so prevent an undue radiation of heat during the night; but ordinarily kept it on night and day, except in the season of rain. The heated air, well saturated with moisture, directly under the glass is very grateful to the roots; and by this process they are constantly attracted towards the surface, where they find plenty of air and aliment. My *Royal Muscadine* were ripe in the middle of August, the *Black Hamburg* about the 10th of September, and the *White Muscat of Alexandria* the 1st of October. The latter were large-sized berries, transparent, greenish white at first, and becoming yellowish at maturity. They had also that musky and delicious flavor, which is a sure evidence that they had been grown in such a temperature as is suited to their nature. Whether this variety is best of all, is still an open question, and will be, so long as different persons have different tastes. Its good qualities are its solidity and crispness, but melting at the same time, and its high musky flavor. The skin is rather thin, the seeds are few, the color delicate, and the shape oval. The only disadvantage is that it requires a high temperature, and is more liable to fail in a cold season. It is however objected to by some, on account of its perfect sweetness, being thus more cloying to the appetite than other grapes. I think, myself, if I were shut up to one variety, I should (all things considered,) choose the *Black Hamburg*, and next the *White Muscat*. What is called the "*Black Barbarossa*," I have never seen. If the *White Muscat* is so popular with the English, it is because they are grown in forcing houses, and the border enclosed within. Their climate forbids any other supposition.

SEEDLING CHERRIES.

PRODUCED BY DR. J. P. KIRTLAND, EAST ROCKPORT, OHIO.

1. *Tecumseh*.—Large, black, fine flavored. Valuable.
2. *Red Jacket*.—Size—medium. Color—red. Lively flavor. Matures late.
3. *Shannon*.—Large and valuable Morello.
4. *Kirtland's Large Morello*.—Very large. Pit—small. Flavor—good. Promises well. Not sufficiently tested.
5. *Elliott's Favorite*.—Size—below medium. Form, color, and flavor, like *Belle de Choisy*.
6. *Delicate*.—Size—medium or above. Form—conic-oblong. Semi-transparent, often opalescent. Color—delicate, blending of white, vermillion, and yellow. This and No. 5 are Heart cherries, though they resemble the *Belle de Choisy*. Valuable as table fruits, but too tender for market.
7. *Kirtland's Mary*.—Very large. Yellow and white, blushed with red. Delicate and lively flavor. By many considered equal to the *Gov. Wood*.
8. *Doctor*.—Size—medium. Color—amber, or a blending of white and yellow blushed with red. Delicate and rich flavored. Ripens with the *Early May*. Prolific to a fault.
9. *Cleveland*.—Large, amber colored. Delicate and lively flavor. Equally prolific with No. 8. Valuable.
10. *Leather Stocking*.—Large, hard fleshed, not high flavored. Matures very late. Color—deep red, striped and blotched with still darker red or black. A curiosity.
11. *Gov. Wood*.—Very large. Form—spherical. Color—same as No. 8. Equally productive. Flavor—delicious, sweet and rich. *Best of all cherries*.
12. *Late Bigarreau*.—Resembles *Yellow Spanish* in form, color, and flavor; more hardy, and less liable to premature decay; ripens two weeks later, and among the last of the sweet cherries.
13. *Black Hawk*.—Very large, nearly equalling the *Black Tartarian*. Flesh more firm and higher flavored. Color—brilliant and glossy black, like patent leather. Very prolific. Surpasses that variety as a market fruit.
14. *Rockport*.—Large, amber colored, very delicious. Varies in its qualities in different years, more than most of the other kinds.
15. *Logan*.—Large, black, fine flavored. Valuable.
16. *Osceola*.—Size, color, and flavor, same as No. 15. Valuable.
17. *Jockosott*.—Same as the two last in size, color, and flavor. Valuable. Named after a noble Saux chief who died at Cleveland eight years since, and to whose memory a monument was erected by several citizens.
18. *Brant*.—Large, black, fine flavored. Valuable.
19. *Pontiac*.—Same as No. 18 in size, color, and flavor. Valuable. Resembles *Knight's Black Eagle*; far more productive.

Nos. 15 to 19, inclusive, are all destined to rank high, both as table and market fruits.

20. *Powhattan*.—Size and flavor medium. Liver-colored. Very prolific. Popular in our market.

21. *Keokuk*.—Large, black, firm fleshed, not high flavored, rather coarse texture, but sells well in market. Resembles in color and form the *Tradescant*.

22. *Kirtland's Mammoth*.—Size—larger than any other cherry I have ever seen. Color—yellow and white, slightly blushed with red. Flavor—rich and delicate. Flesh—firm. The original tree is large, leaves enormous. Has as yet fruited only sparingly. Requires further testing.

23. *Ohio Beauty*.—Figured and described by Mr. ELLIOTT in Vol. 11 of the *Horticulturist*, after the tree had fruited two years. It was then accidentally destroyed, and I have not since seen the fruit.

The above named varieties, with the exception of Nos. 3, 4, and 22, were raised from the pits of the *Yellow Spanish* or *Bigarreau*, accidentally crossed, probably with the *May Duke*, *Black Tartarian*, and *Black Mazzard*. No. 22 sprung from a *Yellow Spanish* pit, produced by a tree remote from other kinds. Nos. 3 and 4 are the offspring of a *Black Morrello* tree standing in close contact with a *Carnation*.

Mr. ELLIOTT and myself, while testing my numerous seedlings, adopted the *American Heart* as our standard, and no variety was allowed to pass inspection that did not, in our estimation, equal that standard—taking all their qualities into consideration. All of them equal it in size, except Nos. 5, 8, and perhaps 6; most of them exceed it. None of the Heart varieties fall short of it in point of flavor, unless it be Nos. 10, 21, and perhaps 20. None of them were decided on until they had perfected fruit for two seasons. The correctness of our conclusions has now been sustained by the observations of from three to six years, and with the exception of a few of the kinds, they have improved in their qualities with the advancement of age. How they will bear the test of general cultivation, remains to be decided. My locality is peculiarly favorable, in its soil, climate, and exposure, for the production of the cherry, though I think the fruits do not attain quite as large size on the south shore of Lake Erie, as on the rich soils in the valley of the Connecticut river about Middletown, Conn.

Thirty years since, I discovered that while the pits of most of the fine varieties of the cherry were abortive, those of the *Yellow Spanish* were prolific. Endless new varieties may be produced from them. A small per centage will, however, prove to be equal to the parent stock, or to the standard adopted by Mr. ELLIOTT and myself. The rejected are valuable as stocks, forming thrifty and healthy standards, superior to many of the Mazzards.

The cherry will not long survive if the roots are exposed to superfluous water, nor will the Heart varieties produce fine fruits with any certainty in wet and retentive soils. These impediments may in many instances be obviated by preparing large and deep holes, partially filling them with waste stones or bricks, and leading from the bottom of each one a descending underdrain.

ON THE IMPORTANCE OF TIMELY CULTURE.

BY C. E. G., UTICA, N. Y.

IN a climate and soil like ours, spontaneous fruitfulness can never be expected. There are doubtless choice positions where a few trees or vegetables, having once taken root, will grow luxuriantly and produce bountifully; and, although without the elementary constituents of plants existing in the soil no culture, however wise, can make vegetation flourish; yet, in any tolerable soil the prosperity of a crop depends quite as much on the wisdom of the culture as on the inherent quality of the soil.

There is, however, not only a special importance in *culture*, but also in *early* culture. Suppose a hill of corn, or one of cucumbers, neglected until the one is a foot high and the other has made vines a foot long. They are already perhaps one week behind their neighbors in similar soil, but enjoying timely culture. The effort to clear away the weeds from either of these hills will disturb the roots, while their sudden removal will let in a powerful sun upon a plant already feeble by neglect and injury to the roots. By these means the plant is checked perhaps another week.

But suppose, in a good soil, and with wise though late culture, the plant should perfectly recover its health, and grow to its full expansion. The fruit must set at least two and in some cases three weeks later than otherwise. In the case of very early planted crops, or a long season, they may possibly get ripe, but often not. Thus the result is seen to be exactly equivalent to late planting, and the strong probability is that your crop will mature at a season not the most favorable to its health and productiveness. We see thus that one acre of soil receiving *timely* culture, may be as productive as two with *late* culture, while the expense of labor will always be less on the timely than on the untimely. Nor is this all: in the one case the crop may cost more than it is worth, while in the other it will be highly profitable.

I have seen a patch of melons, tomatoes, or pickle cucumbers, and even fields of corn, injured in quantity and quality, not from want of fertility in the soil, nor amount of labor expended upon them, but from the want of timeliness in that labor.

Potatoes seasonably planted, in Central New York, usually gain their utmost expansion and are covered with flowers by the 15th of July. In this case their tubers will be nearly full grown and covered with a firm skin by the first of September. But suppose, in consequence of deferred cultivation, the season of maturity in the tuber should be protracted until late in September. In this case the last two or three weeks of its growth is amid damp, dark, and chilly weather, such as is inconsistent with the healthful elaboration of a tropical plant; it will probably be at least slightly diseased, and so would all other tropical plants.

We reproach the man who by neglect permits a fine litter of pigs or herd of calves to pine and become stunted; but is he less a sinner who with equal carelessness sows or plants more acres than under ordinary circumstances he can wisely cultivate.

THE TREES OF OREGON.

BY N. COE, OF PORTLAND, OREGON TERRITORY

In the August number of the *Horticulturist* you have given the dimensions of several trees in Western New York, with an invitation to correspondents in various parts of the Union to furnish accounts of trees of remarkable size. Take, then, two or three samples of Oregon growth of timber, not the largest that her genial climate has coaxed up into the sky, from this rich, prolific soil, but the largest around which I have yet put my tape line. It may be safe, however, for you to "stand from under" with your dwarf specimens from the Genesee Valley.

A fir tree standing on the farm of Judge STRONG, at Cathlamette, twenty-five miles above Astoria, on the Columbia river, has the following dimensions: Diameter, five feet above the ground, where it is round and sizeable, 10 feet; height to the first limb, 112 feet; height of the tree, 242 feet. The trunk is perfectly straight, diminishes very gradually, and the whole tree is beautiful; yet in this respect not singular, for our forests are composed of trees lofty, straight, and beautiful.


A spruce tree, standing on the bottom lands of Lewis and Clark's river, twelve miles from Astoria, measured accurately with the tape five feet above the ground, is thirty-nine feet in circumference. The place of measuring is above the swell of the roots. The trunk is round, and with a regular and slight diminution runs up straight and lofty. We did not ascertain its height. Nor is it "alone in its glory," but in a forest of spruce, cedar, and fir, some of the trees of nearly and perhaps quite equal size.

Gen. JOHN ADAIR, of Astoria, informs me that about three years ago he bought a hundred thousand shingles, all made from one cedar tree, for which he gave fifteen hundred dollars in gold.

The forest trees of Oregon are remarkable for their straightness, loftiness, and very gradual diminution in size. They are destitute of large branches, and have comparatively little foliage. Two hundred feet in length of saw-logs have been cut from a tree, the smallest end being sixteen inches in diameter. LEWIS and CLARK "measured a fallen tree of that species, (fir,) and found that, including the stump of about six feet, it was three hundred and eighteen feet in length, though its diameter was only three feet."

One of our citizens has received an order from London to cut one of our tall trees into segments, and ship it to that city, there to be erected to adorn the crystal palace. It will be done. Those persons, therefore, who desire it, will be able to examine an Oregon forest tree, with its top pointing up among the clouds that envelop the metropolis of England.

[We hope Mr. COE will find more such interesting items to communicate.—Ed.]



RAMBLING NOTES IN FEBRUARY.

BY PISISTRATUS, PHILADELPHIA.

SEATED by a comfortable fire this very foggy day, the *Horticulturist*, past, present, and *to come*, has been much the subject of contemplation; its late editor, present in vivid memory, and constantly recalled by the framed portrait hanging in view. We all lost a friend when DOWNING died; but NAPOLEON had an axiom that "no man is indispensable." In the case under consideration, NAPOLEON would be but half right; for if we profit by the seeds of taste and instruction sown by our departed teacher, we shall yet get along. Good observers are left; and it becomes every one of them, as they value their instructor to *club* their knowledge, and each one tell what he knows to others.

To have a good garden now-a-days requires study, reading, and practical oversight and knowledge in the owner. The race of gardeners to be procured for moderate wages is not extensive, and when they are good, or "promise well," they can find in this great country, fields of their own. My difficulty has been to keep a good gardener when I had got him. The plans of one year have to be superintended by new hands. If I did not keep a sharp look out, I should never know where my next winter's asparagus and rhubarb, ready to be placed in the forcing beds, were to be found. I would seriously advise no one to incur the expensive paraphernalia of graperies, green-houses, and gardens, unless he loves them well enough to look after them himself. Now and then he will have to do this. He will be a fortunate man, indeed, if he does not find himself as much confined at home sometimes, as a woman is who is so happy as to have an infant at the breast! Twice during this winter I have had to make the fires in the green-house; one gardener took a railway excursion, and was drowned in a canal after stopping at the hotel, and another had an "unexpected" call to get married on a monstrous cold evening. Neglect rather than incapacity, too frequently deprive proprietors of the just expectations they have entertained with regard to returns for their outlays. Regularity, method, and attention constitute the very essence of gardening, and every deviation from these principles will be injurious to all concerned.

I have amused myself for the first time, this winter, with forcing asparagus. After the first trial I have been successful. My beginning was another evidence that books do not always impart *the whole* knowledge required. I consulted the best works, got up a fine frame and plenty of manure heat in the proper way, and in due time placed the roots under good earth, much as I plant out-door beds of this delicious article. Up soon came the article, as fine as could be wished; *but* it was wonderfully "few and far between." Two messes was all I got from this trial. The next was more successful. I planted the roots so as to lap each other as much as possible, and a prodigious yield is the result, so that I have actually supplied several families and my own with fine bunches. This hint will be useful to beginners. The spears derive no nourishment from the ground in this rapid forcing process; all we get is the matter stored

up last season, and consequently the spears are not so thick, generally speaking, as in open air cultivation.

Rhubarb forcing, I find easy and cheap. A barrel sawed in half, placed in the stable yard, and covered with fresh manure, with only a breathing hole in the top on mild days, gives me abundance, and very early; but this winter I placed in three such receptacles five roots each, and brought them into a warm closet behind the chimney in the dining room. *Presto!* what a growth, and what a beautiful and valuable crop! These fifteen roots are giving me now, and have been all January, as much "pie-plant" as we could desire. The growth is most vigorous and really beautiful. I value it much for the latter quality, and sometimes treat a visitor with a peep at my in-door kitchen green-house, to his great surprise.

Salads I have under glass beneath the dining room window—a fine southern exposure; and on occasion of an unexpected neighbor to a cold joint at a late supper, can very conveniently pick it from under the snow without leaving the room. Most delicious it is too, fresh from the case, and picked by your own hands. As this case is robbed, other plants from further off are brought on a mild day to replace them. I thus have salad at hand from early in November till garden supplies come in.

Neapolitan violets in abundance, in a little bed near the south door, protected by an oiled muslin frame, greet me with their odor whenever I step out. Last winter, however, there were very few, owing to the extreme cold.

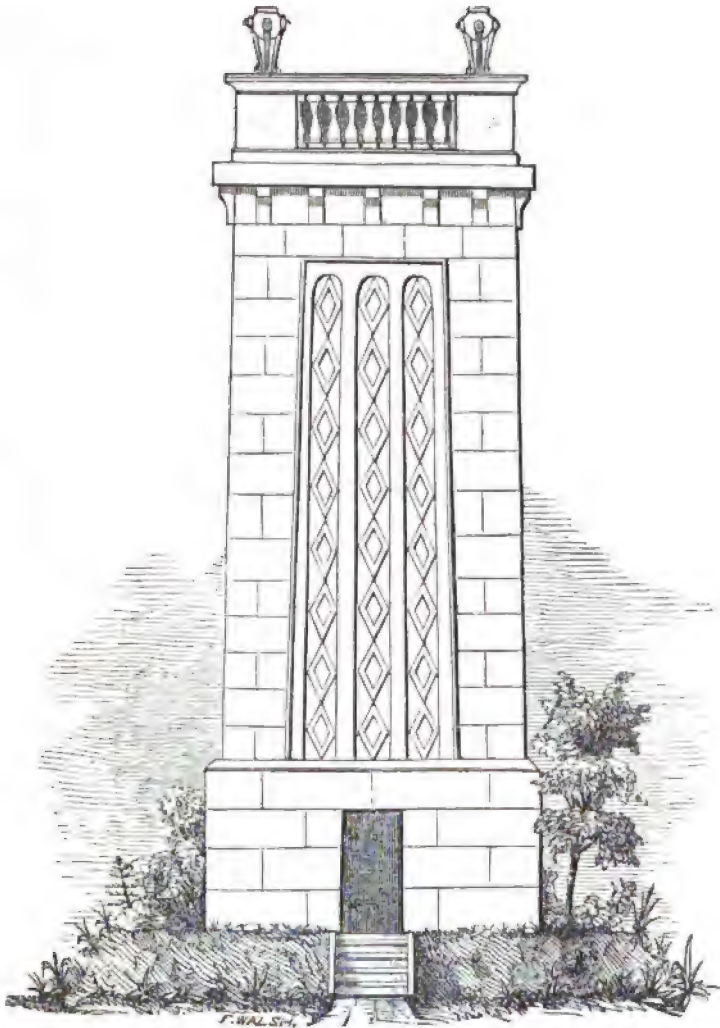
Such are the amusements, as well as the troubles, of a lover of the beautiful, who only found himself at leisure after the age of fifty to indulge his tastes for a garden, and who in fifty experiments has had to learn for himself those particulars which books do not tell. It was only last year that I saw a retired "cit," planting his corn himself, without soaking it. "Why," said he, "the books say nothing of that!" Hence the necessity of periodicals like the *Horticulturist*, which it is pleasing to find is becoming exceedingly *practical*.

IMPORTANCE OF WATER IN GARDENING.

BY D., BLITHEWOOD, ON THE HUDSON.

In your late article on the "Importance of Water in Gardening," you solicit information from those who have had experience in such matters, as to the best modes of supplying water. I have long entertained the opinions you express of the great advantages of water in the proper treatment of gardens and grounds, but the late seasons of severe drouth have *constrained* me to adopt a system of hydraulic improvements here; some account of which may be useful to others.

At the distance of 2,100 feet from the dwelling and gardens, there is a hill 60 feet high, adjoining one of the cataracts of the Sawkill—a stream which bounds the ornamental grounds. Upon this hill, which is level with the site of the house, I have erected a tower in the form of an Italian campanile, (see accompanying sketch,)



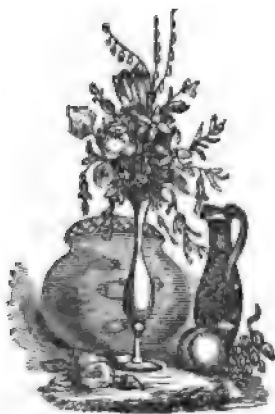
which contains the reservoir, and serves also as a prospect tower. The head of water below the cataract is sufficient for driving hydraulic rams or forcing pumps to fill the reservoir to the top, 100 feet high and 300 feet distant.

To avoid interruption by frost in the use of an overshot water wheel and pump, I adopted two hydraulic rams (in case one should stop,) for constant use, which are covered up, and operate incessantly. The supply by rams is sufficient for all purposes but fountains and jets d'eau, which will require a forcing pump to be used in the summer. The water tower is 18 feet square and 45 feet high, placed upon a terrace for beauty and to gain elevation. Within this is a reservoir 7 feet square and 34 feet

high, constructed in the strongest manner, of oak timber, and bolted with 1-inch iron, and planked and lined with lead,—resisting at the bottom a pressure of about 85,000 pounds. I was induced to accumulate the water in this expensive manner, to obtain great pressure in the pipes to prevent the *gathering of sediment and air*—to supply baths and water closets in the house, and jets d'eau and fountains in the garden and grounds.

From the bottom the water is conducted by 2-inch iron pipes, $3\frac{1}{2}$ feet below the sod, and lateral pipes of lead, varying in size, to supply hydrants for root culture, irrigation, the cattle yard, stable, the garden, the house and fountains. The water tower occupies a conspicuous position and is highly ornamental. The results are so satisfactory and beneficial, that I should recommend similar improvements wherever they can be made.

[BLITHEWOOD, as most of our readers know, is one of the most charming country residences in America. It forms the frontispiece embellishment to DOWNING'S "Landscape Gardening and Rural Architecture," and Mr. DOWNING says of it: "We can recall no place of moderate extent where nature and tasteful art are both so prodigal of beauty and so harmonious in effect." We are happy to be able to offer the example and experience of the proprietor of such a place, on a subject so important as that of water.—Ed.]



Foreign Notices.

CULTIVATION OF CAMELLIAS.—Some extracts from an article on this subject by the Comte de Nancy, in the "*Flore des Serres*," may prove useful, more especially to beginners, in the cultivation of these plants. The choice of soil, the Comte observes, is of the first importance. Good peat, and peat only, should be used. The best is of a chestnut-brown colour, moderately sandy, and soft to the touch; that which is of a black muddy color, without sand, or containing but very little, is bad.

The Camellia generally likes moisture, but the degree of humidity varies according to the season. At the time of flowering, the waterings ought to be more abundant than in winter; and still more abundant when the plants begin to push, and during the whole period of their growth. Water should be supplied towards night rather than the morning, and never in the middle of the day. In hot weather it is advisable to throw water on the floor and footpaths, in order to cool and moisten the atmosphere of the house; but when the shoots have made their growth, when their elongation naturally stops, in order that the wood may become mature and firm towards the end of June, syringing must be sparingly performed; for too much moisture, together with the heat at that time, would overexcite the flow of sap, and induce a second push, thereby preventing the formation of flower-buds. During winter the waterings should take place at considerable intervals; but at all times, even when the Camellia is most at rest, it is necessary to keep the soil moist, for dryness is injurious to the health of the plant, and occasions the flower-buds to drop. The water should be as nearly as possible of the same temperature as that of the house. Rain or river water is to be preferred to spring water.

The Camellia requires plenty of air, and in order that it may circulate freely, the plants should not be too near each other, otherwise the lower leaves are apt to drop off.

It also requires abundance of light, and therefore low houses or pits are more suitable for it than those old constructions commonly called Orangeries; but it cannot bear the ardent rays of the sun, and must be protected from them by nets or other screens, or the glass may be thinly painted over with white paint (Spanish white,) or with lime and milk, or with a thin solution of glue.

Repotting or shifting is not absolutely necessary until the roots completely fill the pot. The operation is usually performed immediately after the flowering; but in my opinion it is best done after the plants have made their first shoots, that is to say, about the end of June or beginning of July. I prefer this period, because the shifting affords the plant a more abundant supply of nourishment, and consequently disposes it to push vigorous shoots rather than to form flower-buds. Varieties not naturally inclined to flower readily must have less pot-room than those that flower profusely.

No shrub bears the operation of pruning better than the Camellia does; none submits with more docility to all the forms of training which the fancy of the amateur may impose upon it; espalier, bush, pyramid, all are suitable to it; but of all forms the most graceful, the most elegant, and at the same time the most advantageous, considering the small place to which greenhouse plants are necessarily limited, and the facility of regular arrangement according to height, is, in my opinion, the pyramidal form. I have myself adopted it.

Certain varieties, generally those of moderate vigor, naturally take this form. Strong-growing sorts can only be brought to it by pruning. In order to do this, we must commence with the first year's shoots. The Camellia usually pushes twice in the first year of its growth; first in the spring, and again in the end of July or the beginning of August. It should be allowed to

perfect these shoots; then, in the end of November or beginning of December, when the plant is in a state of rest, and not before, it is cut back to the first or second eye of the second push, taking care, however, that the eye to which we prune is *not so forward, nor so prominent, as those below it*. This being attended to, all the buds will start in spring simultaneously. But, on the contrary, if we leave the shoot too long, or prune it to an eye that is more prominent or more forward than those below it, that eye will start away, whilst those below will remain dormant.

In the second year the plant, treated as above directed, will produce three or four branches, the uppermost of which should form the continuation of the upright stem; and when the growth is completed, in November or December, this upright shoot is cut back to two or three eyes, unless it be furnished with flower buds, and in this case the shoot is not cut back till after flowering. If the shoot be in such condition as that all its eyes appear likely to break in spring, it need not be shortened at all. The same rules are applicable as regards the pruning and training of the plant in the next and following years. It must be borne in mind, that under no circumstances should the Camellia be pruned when its sap is in active circulation; for by so doing, the sap rushes to one, or two, at most, of the upper buds, and leaves the other inactive. For the same reason, the herbaceous extremities, of growing shoots should not be pinched.

Excepting in frosty weather the Camellia requires no heat during winter; it will even bear, without injury, two or three degrees of frost, so that, unless the winter is very severe, heating may be dispensed with, provided warm coverings are employed. But when fire is necessary it must be so managed as to maintain uniformity of temperature; for great variations in this occasion the dropping of flower buds. The hot-water mode of heating is doubtless the best: but notwithstanding its advantages under certain circumstances, I have been obliged to give it up, because, in the country, it is very difficult to get workmen to fit up the apparatus properly. I originally adopted the system for heating my house; but although I paid dearly for the apparatus, it worked badly; and while it cost me much for fuel, it afforded but little heat, and I therefore had it taken away. For several years I have used small cast-iron stoves, from 15 to 18 inches in height, and about 1 foot in diameter. One or two of these, as may be necessary, I placed inside the house, on the footpath. A tube of sheet-iron is fitted to the stove and made to pass through a square of tin plate adapted to the sash. A very small quantity of wood, and some dry tan peats or some grape pressings, are sufficient to heat these stoves so as to give as much heat as I require. I take care to remove any plants that may be too near the stoves; and I moderate the draught of the furnace by a damper in the sheet-iron tube, which is completely shut when the fuel has given off its smoke. A pan of water is placed on the furnace, in order to give moisture to the air. The stoves can be removed in a few minutes, and can be as quickly replaced.

In forcing the Camellia, the temperature must be very gradually raised. In commencing, towards the end of September, the house should be kept warmer, by shutting up early, and by covering at nights when these are cold. About the beginning of December a little fire heat should be given at night, so as to raise the temperature only 4° or 5°; then it may be progressively raised to 50° Fahr. by the middle of December. Occasionally, and more especially when the sun is bright, it is advisable to sprinkle water on the footpaths; the moisture thus produced settles on the glass, moderates the intensity of the solar rays, swells the flower-buds, and facilitates their expansion. Thus treated, Camellias will show their first flowers in the beginning of January.

The leaves of the Camellia should, at all times, be kept as clean as possible. I would advise amateurs to do as I do myself every autumn, and that is to wash every leaf, one by one, successively. I attach much importance to this operation, which I call the *toilette* of the Camellia. It has not only a great influence upon the health of the plants, but it also gives a brilliancy and freshness to the foliage, which enhances the beauty of the flowers.

Notwithstanding all our care, some plants will become less healthy than others. Robust as the Camellia is, like all created beings it is subject to maladies, which neither science nor human foresight can prevent. An amateur, therefore, need not be astonished nor discouraged if, among a number of plants, he should find some unhealthy. The indications are yellowness of the foliage, weak and stunted growth, and dropping of the flower-buds. When such is the case, the plants must be taken out of the pot; the roots must be closely examined, and all that are

damaged or decayed must be cut in to the quick; and after shaking away as much as possible of the ball of the old soil, the plant must be repotted in a smaller pot than that from which it was taken; all unhealthy naked branches must be cut out; the plant should then be placed in a pit near the glass, but shaded from the sun.—*Lond. Gard. Chronicle.*

SKIMMIA JAPONICA.—This fine new evergreen shrub, which is attracting a good deal of attention in your columns, and elsewhere, was discovered by me in the winter of 1848, and introduced to England in 1849. I met with it in a nursery near Shanghai, and it was there the rarest and most prized plant of the collection to which it belonged. The nurseryman told me that it was brought to him from a high mountain, in the interior, named Wang-shan, and consequently the plant is called by the Chinese the Wang-shan-Kwei. The last term was given it on account of the fragrance of its flowers, which the Chinese consider as sweet as the *Kwei-wha* or *Olea fragrans*. These scented flowers are produced in great profusion in early spring, and are succeeded by bunches of red berries, like those of the English holly. The plant exhibited to the Horticultural Society, in Regent street, by Messrs. STANDISH & NOBLE, a week or two ago, gave but a faint idea of the beauty of the species. The berries of that plant were scarcely ripe; later in the season they become much larger, and are then of a deeper and clearer red.

My own opinion is that this fine bush will prove perfectly hardy in this country. It cares nothing for the cold winds and sharp frosts about Shanghai, and no doubt endures a much lower degree of temperature on the inland mountains already named, where it is found wild, than in places nearer the coast. Although this is my opinion, I think your reporter was perfectly justified in "erring on the safe side," and saying that more proof of its hardiness in this country is required. I recollect well when I wrote an account of *Weigela rosea*, some years ago, in the *Journal of the Horticultural Society*, I advised the possessor of that beautiful shrub to keep it in the green-house until its hardiness was proved by the Society. Well, there was no harm done in that instance, although every one knows now how hardy *Weigela rosea* is.

I may now notice the letter of your Liverpool correspondent, in which he tells you that *Skimmia Japonica* has borne the "pelting of the pitiless storm" during the last seven years. As you justly remark, your correspondent must be writing of *Skimmia Laureola*. In my opinion, however, his letter goes a long way to prove the hardiness of *Skimmia Japonica*, as it comes from a much colder country than Dr. WALLICH'S *S. Laureola*. It proves, also, what I have long feared, that many persons in the trade will, by mistake, send out *S. Laureola* with the name of *S. Japonica*, as the names have been mixed and confused. Until Dr. LINDLEY set the matter right in "*Paxton's Flower Garden*," an idea had got abroad that the Chinese and Himalayan plants were identical; but in reality no plants can be more different, in so far as their ornamental properties are concerned, although they may resemble each other in their stems and leaves. The Himalayan plant has been in the garden of Mr. LUSCOMBE for some years, and yet I am informed by that gentleman that it scarcely ever opens its flowers, and never produces berries. The beauty of the Chinese plant not only consists in its being a nice dwarf evergreen bush, but also in the profusion of its sweet-scented flowers, and in the abundance of its holly-like berries. The former is a plant of no value for ornamental purposes, while the latter will, no doubt, form in a few years one of the most attractive winter plants our gardens can boast of. Fancy if you can our borders or parterres dotted in mid-winter with a little evergreen bush, only two or three feet high, and covered all over with bright red berries, each of which is as large as those of the common holly. In green-houses, too, it will be invaluable for decorative purposes, where its flowers, although not showy, will fill the air with the most delicious odor, and its berries will be most attractive in the dull months of winter.

Those of your readers who wish to add the plant to their collections, have, in the description I have just given, the means of knowing when the true *Skimmia Japonica* has been sent them, or whether they have received the Himalayan plant in its stead. I think you will agree with me, that the discoverer of a fine, new, ornamental plant, may justly complain of mistakes of this kind. It is only a very short time since another blunder of this description, was committed with the new

Cephalotaxus, discovered by me in the north of China. Sir WILLIAM HOOKER described and figured that plant in the *Botanical Magazine*, and pronounced it to be quite new, and a tree of great beauty. And yet, notwithstanding that high authority, I find that large quantities of *Cephalotaxus Harringtoni* have been sent out with the new name of *C. Fortunei* attached to them. Nurserymen ought to guard against such mistakes, as they are not only annoying to the purchasers of plants, but tend greatly to confuse our nomenclature.—R. F., in *London Gardeners' Chronicle*.

DENDROBIUM TRANSPARENS (Wall).—*Orchidaceæ*.—(*Bot. Mag.*)—A beautiful epiphytal species, having some resemblance to *D. Pierardii*, flowering in great profusion during summer, and the flowers are produced freely on the stem. It grows with stems some eight or ten inches high, about the thickness of swan-quills, and clustering from a fibrous root, where they swell into a kind of bulb or tuber about the size of a pea. The leaves are borne on the young stems, and are from three to four inches long, linear-lanceolate in form, more or less acute, recurved, sheathing and striated. The old stems from which the leaves have fallen, produce the flowers in twos at each joint. The sepals are spreading lanceolate, somewhat acuminate, white, and tipped with purple rose color. The petals only differ in being rather broader and more obtuse. The labellum is larger than the other coroline parts, oblong ovate, white; the recurved obtuse apex beautifully tinged rose. The sides, consisting of two obscure lobes, are involute; the margins waved, ciliated, the disk having a large dark crimson spot, passing into the oblique striæ at the edges. This desirable species is a native of Nepaul, and probably many other parts of Eastern Bengal. It was received in a living state from Assam, whence it was sent by Mr. SIMON. Few species, says Sir WM. HOOKER, are more lovely, even among the Oriental Epiphytes, which are proverbial for their beauty over those of the new world.—K., in *Gardeners' and Farmers' Journal*.

BEGONIA PRESTONIENSIS.—Messrs. LUCOMBE and PINCE's advertisement, at page 561, reminds me of an opinion I was led to form on receiving from them lately fine specimens of the above named plant—that Begonias must soon become as popular as Achimenes, Gloxinias, and the like, now that the process of hybridization has been so successfully brought to bear upon them. You will, perhaps, allow me to mention, for the information of those who have not seen it, that this *B. Prestoniensis* is probably the handsomest of the Begonias—certainly one of the most brilliant; so that it must become a popular plant. It is said to come from *B. cinnabarina* crossed with *B. nitida*, and unites with foliage and flowers very much like those of the former the shrubby character of the latter, so far modified as to be literally of a neat branched habit of growth; the leaves are obliquely ovate-acuminate, slightly lobed, and doubly-serrate on the margin, and the flowers come along the branches in axillary trichotomous cymes, elevated on long red peduncles above the dark green leaves. These flowers (male 4-petalled, female 5-petalled) are, perhaps, rather smaller than in *B. cinnabarina*, but brighter colored, and they have unquestionably a very pleasant rose-like odor, which was discoverable after a long railway journey. It is a true Diploclinium, not a Platyclinium, like its female progenitor, having the placentas double. A figure of it will be published in the forthcoming, and, I believe, final number, of the *Garden Companion*.—Thomas Moore, in *Gardeners' Chronicle*.

GYNERIUM ARGENTEUM.—I have seen a plant of this magnificent grass growing on the banks of the Dargle river, which blossomed this season, throwing up 47 stems not less than 20 feet high; the plant measured 9 feet in circumference. Many who came to feast their eyes on the beauties of the Dargle were struck with its picturesque appearance, and were surprised that it had so long escaped the notice of botanists. Many will be desirous to see it next season, for I am sure it will be an object of great curiosity.—T. D. H., in *Gardeners' Chronicle*.

BERBERIS DARWINII.—I cannot but regard this novel introduction as one of the nicest evergreen shrubs in the country, and likely to become a universal favorite. Any dressy, hardy shrub, which never assume a coarse habit, and which flower freely for months, are of infinite service to the decorator of grounds, whose flower or shrubby borders are but too apt to appear monotonous through lack of variety. Americans and Roses are the two principal groups; indeed, these withdrawn, the modern shrub border would be poor indeed. Among the peculiarities which this elegant evergreen possesses, is the property of carrying the most beautiful and glossy dark green foliage, nearly all the year; perhaps I ought to have said the whole year. It possesses the most graceful habit imaginable; an airy elegance seems to be its character through every period, and it appears peculiarly adapted for trailing purposes; the plant being inclined to adapt itself to flat surfaces with the utmost facility. One feature, and that no mean one, remains to be noticed, and that is the property of flowering twice in the season, if not through the whole spring and summer. Such, at least, is the habit of the plant I possess; but I may remark, that such habit has been induced by pinching or stopping the points, in order to produce a closer growth, and to gain cuttings. Two or three suckers came up in succession during April and May; these were stopped when a foot long, and the axillary shoots from these are now hanging laden with their golden cups. The tint of the foliage is akin to that of *Escallonia macrantha*; but that is barely hardy, or what a valuable shrub! Now, this property of being so readily controllable as to its floral habits, is a character of much value, properly acted upon. All such shrubs should be kept classified in the mind of the cultivator, and acted upon at set periods, if possible. I think it not improbable that it may be fit to group with *Forsythia* and *Weigela*, as a moderate spring forcer; and would, in that event, be of much service in the spring bouquet. I can even fancy it encircling a flower basket; its dark glossy green-and-gold would look well round a pile of scarlet *Geraniums*, scarlet *Lobelias*, or even the *Salvia patens*. What a beautiful trellis plant, too, as a division in gardening affairs!—*Robert Brrington, in Gardener's Chronicle.*

BERBERIS PALLIDA, Benth.—*Berberidaceae*. (*Past. Fl. Gard.*)—A beautiful evergreen shrub, growing from five to six feet high, and requiring the shelter of a green-house during winter. The flowers, which appear in early spring, are yellow. In the autumn its large loose panicles of deep purple glaucous acid berries give it a very ornamental appearance. It is very graceful in habit, but its pallid flowers are not produced in great profusion. It is a native of Mexico, where it occurs but sparingly.



BERBERIS PALLIDA.



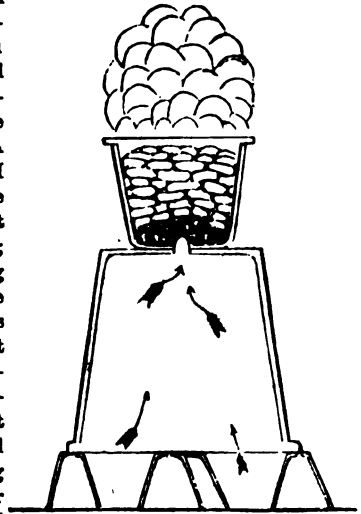
ACACIA DIFFUSA.

ACACIA DIFFUSA, Ker.—*Leguminaceae*. (*Past. Fl. Gard.*)—A handsome and profuse flowering green-house shrub, with balls of bright yellow flowers, which appear in winter, and short, narrow, spine-pointed phyllodes or leaves, at the base of which a small oval gland sometimes (not always) appears. Native of Van Dieman's Land, where it is very common. It differs from *A. siliculaformis* of CUNNINGHAM in being altogether much larger, the phyllodes in particular being as large again, and becoming wrinkled when dry or old. (*Syn. A. prostrata*, Lodd. in *Bot. Cab.*)

CANTUA DEPENDENS AND BICOLOR.—Those elegant greenhouse plants *Cantua dependens* and *bicolor*, the former of recent introduction to our greenhouses, flowered here last May, and fully realized all that had been previously stated in their favor. They are of easy culture, and well deserve a place in every collection. Their small but elegant foliage forms a pleasing contrast to the coral-like tube-shaped pendulous blossoms. *Cantua dependens*, or *buxifolia*, as it is also named, produces its flowers in corymbs from the extreme points of the principle shoots of the previous year's growth, and are of a beautiful orange color, diffused with scarlet. The flowers of *bicolor* are of a similar color, but not so long in the tube; solitary, and not confined to the points of the shoots, but are equally distributed over their twiggy side branches, which have rather a rigid appearance. They must not be stopped after they have completed their growth, as they both flower on the matured growth of the previous year, and not on the young shoots like *Fuschias*. They grow well in a pit that has been previously filled with prepared oak or other leaves. The plants should be kept near to the glass, but not plunged. They will require attention in stopping, tying out, and standing clear of each other—the former must be especially attended to; for if gross shoots are allowed to ramble, not only will they destroy the uniformity of the plant as regards its growth, but will also monopolize a very undue proportion of the flowers. It may not be desirable to take up the whole of a pit for the *Cantuas*; should that be the case, they grow well with *Fuschias*, and might be introduced with the first succession the beginning of March. They will require shifting as soon as the pots are filled with roots, and if desirable, might be shifted twice during the season, supposing they were started in three-inch pots. Abundance of air must be given at all favorable opportunities; and as the season advances, the lights may be drawn off altogether. They will require a moderate supply of water during their growth, but when that is nearly completed, watering may be gradually decreased, and the plants placed out in the open air in a cool place till they begin to drop their leaves, for although they are only part deciduous, they will require but very little water during the winter. The middle of February, or beginning of March, the plants should be examined with regard to the drainage, returned carefully into the same pot, top dressed and introduced to some gentle forcing-house, and by the middle of April to the beginning of May the plants will bloom and continue in flower a month or five weeks. A succession might be had by introducing more plants a fortnight later. Soil, equal parts of light turfy loam and leaf mold, with enough sand to keep the compost open, will suit them very well.—*M. Busby, in Gardeners' and Farmers' Journal.*

NEW WEeping WILLOW.—When a new plant is brought forward, it is proper that some history of it should be given, for the satisfaction of the public. The *Salix caprea pendula*, or Kilmarnock Weeping Willow, was procured by me about six years ago, from Mr. JAMES SMITH, an old and enthusiastic botanist, who resided at Monkwood Grove, near Ayr. He was an ardent collector and cultivator of all varieties of British plants. He did not inform me where he procured this variety of *Salix caprea*; but as the species is common in hedges and ditches all over Scotland, it is likely he picked it up on some of his rambling botanical expeditions. It does not seem to take well grafted on other willows; I have therefore cultivated it principally from layers, which I trained up to poles. The plant is a most inveterate weeper, as pendulous as the weeping ash, though not so rigid in its habit. Its twigs are stouter than those of the *Salix babylonica*, and it has large, broad, glossy leaves of a deep green color. It flowers very freely on the young twigs in spring, and is quite hardy, as a matter of course, seeing the *Salix caprea* is as hardy a plant as we have in this country. The name Kilmarnock Weeping Willow has been given to the plant to distinguish it from other weeping willows, such as the American Weeping Willow, sent out by Mr. RIVERS some years ago. All who have seen the original specimen plant in the nursery here are very much delighted with it, and I trust it will be approved of by the public generally.—*Thos. Lang, Kilmarnock, in London Gardener's Chronicle.*

FUMIGATING PLANT HOUSES.—I have often had occasion to observe, that during the process of smoking glass-houses, for the purpose of killing green fly, the men who perform this duty remain in the house to keep, as they say, the coals glowing; and there they blow away with bellows, or what is more inconvenient, with their own wind-pipes. Having filled the house with smoke, they retire half suffocated. I tried it once after this fashion, but soon had recourse to a simple and more agreeable method, by which I was at once exempt from remaining all the time in the house. A glance at the engraving will best explain the process I adopted. Place four thumb-pots at equal distances in the path of the house; place on these a twelve-inch pot inverted, so that the rim of it rests upon each of them; then on the top of this place a six-inch pot, with glowing charcoal and tobacco paper, in such a position that the holes may form a communication. As soon as these pots are placed the workman leaves the house, and the draught through the inverted pot is so strong that if the greenhouse door is left open only for a few moments, the tobacco would be consumed; but when it is shut, as it ought to be, the coals remain in a glowing state, and fill the house in a very short time with smoke. According to the size of the house, pots will be requisite at two or more places. Brown's patent fumigator is a very useful contrivance, particularly for pits; but its being so soon out of order induces me to consider the above method, for nurserymen at least, far superior.—*Ben.*—[This is a very good plan.—*Ed.*]—*London Gardeners' Chronicle.*



HORTICULTURAL SOCIETY'S GARDEN, TURNHAM GREEN.—One of the most interesting plants at present in flower here is the Pampas Grass of Brazil, (*Gynerium argenteum*), a good specimen of which is growing in the American garden, near its entrance. This plant has 12 flower stems, each some 8 feet long, about the thickness of the thumb, and surmounted by an erect panicle of inflorescence at least 18 inches in length, which beneath bright sunshine looks like a beautiful light-colored feather spangled with silver; the panicle is in the form of that of the beautiful *Arundo phragmites*. The leaves, which are some 7 or 8 feet long, with a hard flinty skin, grow in tussocks, which, in situations at all favorable, soon acquire a large size; when in flower, certainly few plants are more striking or magnificent in appearance than this gigantic Grass, which being perfectly hardy, will be found to be a great acquisition to the ornamental grounds of this country.—*London Gardeners' Chronicle.*



Editor's Table.

IMPORTANT POMOLOGICAL MOVEMENT IN BELGIUM.—From the *London Gardeners' Chronicle* and other European papers we have intelligence of a movement in Belgium of the utmost importance to American pomologists. The Belgian Government has issued a Royal Commission for the purpose of collecting and publishing all existing information concerning the qualities of fruits and their cultivation. The old kinds still deserving preservation are to be described, as well as the numerous varieties of modern origin; the names by which they are known are to be reconciled and reduced to a common standard; and the best sorts are to be illustrated by figures. This measure, which the Agricultural Congress of Belgium has for four years recommended, is confided to eight gentlemen of the country, and to certain corresponding members, among whom Mr. RIVERS, of Sawbridge-worth, and Mr. ROBERT THOMPSON, of Chiswick, represent Great Britain.

The work will appear in parts, each containing four colored plates, and the necessary letter-press. Ordinary sets are to be charged twenty-four francs, and fine paper copies thirty-six francs a-year; the first part is advertised for the beginning of the present year.

The Commission announces that no statement whatever will be made, the truth of which is not ascertained, and which shall not have been justified by experience. The errors which ignorance, *charlatanerie*, or private interests have rendered current will be rigorously exposed. Every writer is to sign his own article; but no article is to be admitted which shall not have been specially discussed by the Commission. The points to be elucidated with each variety will be the best mode of culture, whether as standard, pyramid, or against walls; the bearing vigor, good quality and keeping; the soil best suited to each, and the settlement of the synonyms. None but the finest kinds will be figured, that the Commission guarantees.

Our National Pomological Society has no doubt to some extent been the means of calling out this Commission. It is much needed, and if the work is prosecuted in the thorough manner indicated will do much good.

GUTTA PERCHA BASKETS FOR EPIPHYTES.—A correspondent of the *Allgemeine Gartenzeitung* suggests the use of gutta percha, instead of wooden, baskets for the growth of Epiphytes, air plants so called. He says: "It is not affected by moisture, and therefore durable and cheap; besides, the roots are not injured by coming in contact with wire, which is used in the construction of wooden baskets." We have no doubt but that very tasteful baskets may be made of this pliable material, but it is very doubtful whether plants will flourish in them so well as in those entirely of wood, which is a more natural material. It is worth a trial.

THE CAJAN PEA.—We have to thank A. H. EERNST, of Cincinnati, for a few of these peas. They resemble a common garden pea, but the plant is of a woody, erect growth, and was formerly classed in a botanical arrangement with the *cytisi*.

A NEW SOUTHERN PEACH.—The Rev. A. B. LAWRENCE, Woodville, Mississippi, sends us the following description of a seedling peach, which will be interesting to our friends at the South: "Fruit—very large, often measuring between eleven and twelve inches in circumference. Skin—deep purple next the sun, when fully exposed, shading off toward the sides to a bright pink; on other parts, a creamy white, with crinkling lines of pink running across in parallel lines. Flesh—greyish white, delicate, tender and peculiar flavor, partaking slightly of both the strawberry and pine apple. Ripens here about the last of July or first of August, parting freely from the comparatively small stone. Leaves—large, with uniform glands.

The above description is taken from the original tree, a volunteer growing in a cotton field at least half a mile from where there has ever been a person dwelling. The tree is very old, rotten at the heart, and in almost the last stages of decay. Some of the leaves measured over nine inches in length, and wide in proportion. I have proposed to name it *Henry Clay*.

THE UNITED STATES AGRICULTURAL SOCIETY held its Annual Meeting at Washington on the 2d of February. The attendance was good, the sessions interesting, and the prospects of the Society encouraging. Some \$2,000 was added to its funds during the meeting. The president, MARSHALL P. WILDER, made an interesting address, giving the history of the formation of the Society, and its operations thus far, and making many valuable suggestions for its future guidance. Mr. WILDER was re-elected President for the ensuing year. A Vice President was selected from each state. The other officers are as follows:—J. C. G. KENNEDY, Corresponding Secretary, Wm. S. KING, Recording Secretary, and Wm. SEEDEN, Treasurer.

The Executive Committee have prepared a memorial to Congress, asking for "a portion of the money now annually appropriated to the Patent Office for the preparation of the Agricultural Report and the collection and Distribution of Seeds," with a view to the performance of that work themselves. It was resolved to urge the erection of a monument to DOWNING in the grounds of the Smithsonian Institute.

THE New York State Agricultural Society at its late Annual Meeting passed the following resolution:

Resolved, as the unanimous opinion of this Board, that to no man more than to Mr. TUCKER is the Society indebted for its present highly prosperous condition, and that the thanks of the Executive Committee, together with a service of plate to the value of \$500, be presented to him, as a testimonial of their high appreciation of his services and character.

The compliment is well deserved.

THE Burlington Gazette, notices the death of the New Jersey Horticultural Society, "of a complication of disorders," and indulges in a very feeling obituary, which is closed with the following lines:

"Afflictions sore, long time she bore,
Physicians were in vain;
And now at last, the struggle's past,
She'll ne'er revive again."

POTATOES.—Mr. C. E. GOODRICH, of Utica, has given the subject of potato culture much attention. We have admired his fine exhibition at our State Fairs, and the freedom with which he communicated information. We refer with pleasure to Mr. G.'s advertisement.

The following, which we copy from the *Maine Farmer*, is interesting at this time, when the value of guano is exciting so much attention.

GUANO, AND QUINCE STOCKS.—During a brief visit, last autumn, to an intelligent cultivator, who resides in New Jersey, on the banks of the Delaware, some 20 miles above Philadelphia, and who grows fruit and vegetables for that market, while conversing about his facilities for obtaining manure, he remarked that stable manure could be had, landed on the bank of his farm, from sloops, at \$2 per cord, but thought guano, at \$50 per ton, was decidedly cheaper, besides being free from weed seeds, and he used it almost exclusively. The soil was what we should call a good light loam, although it is there termed a strong loam, in distinction from the sandy lands of eastern New Jersey.

Among the many things which attracted attention at this place, the one that interested me most was an orchard of 1500 pear trees, on the quince root. These were not all planted at the same time, nor were they alike in other respects, for some 300 or 400 of them were grown in this country, and grafted upon the common quince, probably the apple or pear quince, or seedlings from them. These were *dwarfish enough*, and though they had been planted seven years, had borne but little, and decidedly realized the idea which used to prevail, that quince rooted pears were necessarily poor, weakly and short-lived trees; but the other 1100 or 1200 were fine trees, imported from France, and grown on the Angers quince, or some other hybrid variety, equally adapted to this purpose, and their condition was in striking contrast to that of the others—thrifty, healthy, and of vigorous growth, and bearing all they were able to do without injury. Having been carefully thinned out, the fruit was large and of fine quality, and presented a rich treat to the eye, as well as promise of a richer one by and by to the palate.

Among them were 150 trees, (three rows), of the variety called *Duchess d'Angouleme*, which had been planted four years, and were bearing nearly enough, and I am not sure but quite enough, to pay the cost of the trees, planting, and the land they stood on; for he had bargained the whole crop to a dealer in Philadelphia at \$1 per dozen, who would undoubtedly realize 12½ cts. each for them; and how many pears, at that price, would it take to pay 50 or 75 cts. for a tree, and 25 cts. more to plant, and mulch, and tend it properly the first year, and also the 400th part of say \$200, for an acre of land, (they were 8 feet apart, with 10 feet between some rows,) and for two or three pounds of guano per annum, for three years, at 2½ cts. per lb.? I reckon a dozen and a half would not be out of the way. I plucked one or two of them, although not fully grown, to bring home and compare with my own, which were growing on trees only two years planted, but they weighed 15½ and 16 oz., and mine only 11½ and 12 oz.

This, by the way, is a variety which always succeeds best on a warm, rich, light soil, and as mine was heavy, and the trees only planted some sixteen months, I didn't feel exactly inclined to "give up the ship," as yet.

But to return to guano, which came pretty near being lost scent of in running over this orchard, there are two or three points of some consequence to be determined by the cultivator before using it, and his success, presuming, of course, that he buys a good article, will be very much in proportion to the correctness of his practice in regard to them,—the quantity, the time, and the mode of application. The quantity should be *enough*; the time, long enough before the seed for it to impart to the soil all its acrid and caustic properties, and become thoroughly mild; and the mode should be to cover deep in light soils, and less deep in proportion as they are heavier.—S. L. G., in *Maine Farmer*.

MARTYNIA FRAGRANS, in one of your late numbers, is represented as being rather tender. With me it ripens its seed from plants self-sown in the natural ground, just the same as the common one. This last—the common *Martynia*—I find much preferable for pickling. CHARLES ELLIOTT.
—Sandwich, C. W.

DWARF PEAR TREES.—As, at the present time, there are many (some of them extraordinary) accounts relative to dwarf pear trees—their produce and its market value—and as my experience in their cultivation does not accord with much that I read respecting them, I will, with your permission, give your readers a four years' history of about seventy of them, premising that they have been well taken care of and received all the kind attentions their most sanguine advocates could desire in the way of annual manuring, spring pruning, summer pinching, mulching, &c., &c.

Twelve *Duchesse d'Angouleme*, fine, healthy trees, nearly six feet high, and branched almost to the ground. They bloom bountifully every year, but as yet have produced but ten pears.

Twenty-two *Louise Bonne de Jersey*—healthy trees—have produced three pecks of fruit.

Ten *White Doyenne*—healthy trees—have produced two pecks of fruit.

Ten *Bartlett*—thrifty trees—have produced three pecks of fruit.

Ten *Flemish Beauty*. These trees are double worked, fine, and healthy, but, as yet have never formed a blossom bud.

Five *Summer Francreal*. Trees, healthy, but no blossom buds.

One *Duchess d'Orleans*—Never bloomed, but has now a few blossom buds.

Now as to matter of profit, here is a little over two bushels of fruit, which, valued at say four dollars per bushel, (no mean price) would be eight dollars as a credit against interest on first cost, manure, and rent for four years, which, if the trees are valued at first cost of one dollar, each three years old, would amount to a gross debit of \$22.50, leaving a balance of \$14.50 against the trees, without any charge for attentions or blight deaths. The latter, as yet, I have escaped.

It might be urged that the account would have stood better if I had planted none but *Louise Bonne de Jersey*, *Bartlett*, and *White Doyenné*, which would be true as far as this account is concerned; but if all should plant only the most productive sorts, the price would soon be down below the price here assumed, viz., four dollars per bushel.

Again, it might be said that the trees are not yet in a full bearing state. But in answer to that, I would reply, that if they do not do much better than they now do, they will have such an arrearage against them as will take the term of their natural life to wipe off.

These trees, from being, as Mr. RIVERS says, so "come-at-able" that every bud and branch can be watched so completely throughout all the stages of their growth, will no doubt be a source of much pleasure to the amateur; but that they will ever be a source of much profit, I have many doubts. J. FRAZER.—*Rochester, N. Y.*

We think the interest account on the seventy trees is pretty large, but admitting it to be correct, we think Mr. F. has no good reason to complain. Very few planters of dwarf trees will expect the first four years product to balance the outlay; indeed, if the trees were ours, we should prefer to take our profits in growth instead of fruit, and we apprehend that Mr. FRAZER, if asked to sell his trees to-day, would ask a price that would induce the purchaser to believe they had not been a very unprofitable investment. One thing is certain: dwarf trees have no such fault as that of tardiness in bearing. The defects are of an opposite nature, according to all our experience.

EVERGREEN TREES.—In the embellishment of private gardens, as well as public grounds, the evergreen trees should be planted. While the deciduous trees have lost their foliage, nature, as far as trees are concerned, seems comparatively dead, and without the evergreens a barrenness pervades the whole scene. Contrasting, therefore, in a great degree, and re-animating all around, the beautiful Norway spruce, balsam fir, red and white cedars, and the different pines, keep alive our love for trees during "winter time," and our hearts warm in admiration of the Author of all things, who for all times and seasons has in great wisdom provided plants and trees in full life and vigor, to adorn this beautiful earth. We have often been distanced, and spent much time to

admire the symmetry, foliage, and graceful appearance of the Norway spruce and red cedar trees, and have in our hearts thanked the persons who had planted them, for the great pleasure we had enjoyed. When covered with damp snow, what more beautiful than the trees we have mentioned, with low branches touching the ground, tapering high up, a majestic and perfect piece of workmanship—God its architect.

In all our perigrinations, nothing has made a deeper and more lasting impression, than the "wild-woods" which cover the Green Mountains of our own country. There, dressed in living green, stand trees of all sizes of the fir, hemlock, cedar, spruce, and pine, and of most beautiful proportions, with their fruit of cones, which gradually from time to time drop to the earth for sustenance, with seeds perfected—germs of other as beautiful trees in time to make the "forest shade." JAMES H. WATTS.—*Rochester, N. Y.*

OSAGE ORANGE.—In 1833 I received two species of Osage Orange, *M.* and *F.*; the former died, the other lived, and, strange to say, once bore one single fruit. The tree was a beautiful one, perfectly acclimated, and had formed a thick, wide-spreading, umbrella head. I never knew it to throw up a shoot from its roots. It was about fifteen or sixteen years old, when a stupid, lubberly lout of a fellow cut it down in my absence. I told the clod-pole to hoe up some weeds around it, and he levelled it with the ground.

I have raised some plants from seed. These do not display any natural inclination to cherish suckers from the roots. By pruning its natural shoots, the Osage Orange will endure our latitude, 42 deg. 30 min. north. CHARLES ELLIOTT.—*Sandwich, C. W.*

IN reply to T. G. YEOMANS, in the last number of the *Horticulturist*, respecting the Osage Orange, I will say, that so far as can be judged from one plant which has been in my grounds about nine years, during which time it has been removed twice, and not a single sucker has ever appeared from the root. My opinion is that it will make an admirable hedge plant. If it has a fault, it is a too luxuriant growth. In the winter, one-third, or even one-half, of the last season's wood is usually killed with the frost. So far from this being any objection in a thrifty-growing hedge plant, I look upon it as a decided recommendation, because it helps very considerably to keep the hedge thick and bushy, if clipping and trimming is neglected, which is likely to be the case in many instances. WM. ADAIR.—*Detroit, Mich.*

Notices of Books, Pamphlets, &c.

TRANSACTIONS OF THE ESSEX (MASS.) AGRICULTURAL SOCIETY, FOR 1852.

This document does great credit to Essex county. In addition to the comprehensive and excellent address of HENRY K. OLIVER, which abounds with wholesome truth and timely, tasteful suggestions, there are valuable reports, careful and discriminating, on fruits, flowers, and vegetables; on bees and honey; on farms, manures, fattening cattle and swine; and in short on the general run of subjects that interest the farmer and gardener. At this time we shall content ourself with an extract or two from the report on fruits.

The committee recommend to the farmers of Essex to cultivate the best keeping varieties of good winter apples, as a source of income, vastly more than that of Indian corn. They recommend for general cultivation the following: *Hubbardston Nonsuch*, *Baldwin*, *Roxbury Russet*, *Green Sweet*, *Murphy*, *Danvers' Winter Sweet*, *R. I. Greening*, *Yellow Bellflower*, *Minister*, *Swaar*, *Jonathan*, *Peck's Pleasant*, *Ribstone Pippin*, *Ladies' Sweeting*, *Aunt Hannah*, *Red Pumpkin Sweet*, *Large Yellow Sweet Bough*, *St. Lawrence*, *Fall Harvey*, *Williams' Early Red*, *Porter*, *Haskell Sweet*.

Pears:—*Bloodgood*, *Rostiezer*, *Bartlett*, *Andrews*, *Cushing*, *Buffam*, *Flemish Beauty*, *Louise Bonne de Jersey*, *Seckel*, *Lewis*, *Winter Nelis*, *Vicar of Winkfield*, *Black Pear of Worcester*, *Catillac*, *Uredale's St. Germain* or *Pound*; the three last for cooking.

The committee say, in regard to the upland culture of cranberries, of which considerable has been said, that after a careful examination of the system, they find it so expensive in regard to labor, that they cannot recommend it to the farmers of the county; but "would strongly recommend the setting out and extending the area of our cranberry meadows, and also in reclaiming others by the same means which are now used in reclaiming them for the production of English grass."

REPORTS OF THE COMMITTEES FOR 1852, OF THE MASSACHUSETTS HORTICULTURAL SOCIETY, WITH THE SCHEDULE OF PRIZES FOR 1853.

At the autumn exhibition of this great society, the display of fruits was quite extraordinary. The committee say that visitors universally asserted "that it exceeded in numbers and varieties of fruits, as well as in beauty and perfection, every exhibition of the kind yet witnessed by them in any part of the world."

MR. CABOT, the President of the society, exhibited 102 varieties of pears; ROBERT MANNING, 167 varieties; SAMUEL WALKER, 137; M. P. WILDER, 260; HOVEY & Co., 250; B. N. FRENCH, 160 varieties of pears, and 180 varieties of apples; Messrs. WINSHIP, 90 varieties of pears, and 40 of apples; besides multitudes of smaller collections. The premium for the twelve best summer apples was awarded to OTIS JOHNSON, for *Early Bough*; and the second to M. H. SIMPSON, for *Red Astracan*. For the best winter apples, to JOSIAH LOVETT, for "*Cogswell*;" and next to J. B. MOORE, for *Baldwin*. For the best summer pears, to W. R. AUSTIN, for *Summer Francreal*; next to S. DOWNER, jr., for *Bloodgood*. For best autumn pear, to J. STICKNEY, for *Urbaniste*; next to J. H. STETSON, for *Buerré d'Anjou*. Best winter pear, H. VANDINE, for *Glout Morceau*; second, J. GORDON, for *Easter Beurré*; third, J. LOVETT, for *Passe Colmar*. Strawberries.—First, second, and third prizes were all awarded to *Hovey's Seedling*.

Prizes Awarded on the first day of Annual Exhibition.—For the largest collection of pears, greatest number of varieties, three specimens each, to M. P. WILDER, Appleton medal, valued at \$30. For the largest and best grown collection, HOVEY & Co., \$30. For the best and largest collection of apples, B. N. FRENCH, Appleton medal, valued at \$40; second best, A. D. WILLIAMS & SON, \$20. Best twelve varieties, to J. LOVETT, \$20. Best twelve specimens, HOVEY & Co., for *Porter*, \$6. Best dish of pears, twelve specimens, J. STICKNEY & Co., for *Louise Bonne de Jersey*, \$6; second, to J. RICHARDSON, for *Flemish Beauty*, \$5; third, to GEO. B. CORDWELL, for *White Doyenné*, \$4.

The following prizes are offered for 1853:—Prospective prizes for seedling fruits, \$750. For gardens and green houses, \$200. For fruits, \$620. Plants, flowers, and designs, \$700. For vegetables, \$250.

The lists of officers will be found under head of "Horticultural Societies."

TRANSACTIONS OF THE WINDHAM COUNTY (CT.) AGRICULTURAL SOCIETY FOR 1852:

In this pamphlet is embraced the Constitution of the Society, list of members, reports of committees, besides a very instructive address on "*The Economy of Agricultural Education*," by Rev. W. CLIFT. The following sentence is the first that caught our eye in looking over this address:

"Agricultural science, as it gives our rural population increasing intelligence and wealth, will cultivate their taste for the beautiful in nature and art; and benefit the old parish by making it

attractive. The *beau ideal* of life can never be realized in a city, or even in a village. The beautiful in nature, such as greeted the eyes of the first human pair, can find no congenial place there. There is not room enough for the grand old trees, on which time ever sheds a holier light; for the gardens, the orchards, the walks, the fountains, the shrubbery, and all the glad green things in which a cultivated taste loves to embower its home. These things are only to be realized in the country."

CONSTITUTION OF THE MILWAUKIE HORTICULTURAL SOCIETY, ESTABLISHED 1852.

We are glad to learn that this society has made a very prosperous beginning. We shall be happy to note its progress. There are in and around the city of Milwaukie a large number of public spirited and tasteful people who will not withhold their countenance and support from a society that promises them so much good.

APPLECK'S SOUTHERN RURAL ALMANAC AND PLANTATION AND GARDEN CALENDAR, FOR 1858.

A pamphlet of over 100 pages, containing the usual almanac matter; some timely hints; various tables and recipes; the nursery catalogue of the editor; and various other advertisements, all of which the planter will find it convenient to refer to. From the March calendar we extract the following:

"THE FRUIT GARDEN AND ORCHARD.—All fruit trees must be *trained low*, in this climate. The protection of the stem and main branches, and the shading of the soil in which the roots find their support, from the powerful rays of the sun, are absolutely necessary to the production of fruit. This is to be effected only by training the trees with a low head, and encouraging a thrifty growth. We have this well exemplified in the native forest trees. When forest-grown their united heads afford an ample shade. But if standing alone, every tree protects its own stem and roots, throwing out low and wide spreading branches for the purpose. And this is especially the case in the magnolia, beech, &c., which, in their smooth and glossy bark, resemble the fruit trees.

"The complaint occasionally made, that *budded* peach trees very often bear but a scanty crop, and are short lived when compared with chance seedlings, arises, we believe from the practice of budding at a height of three or four feet from the ground, by which a long stem is exposed to the sun. The bark on the south side is absolutely baked, the sap reaches the leaves and fruit in an unhealthy condition; layers of new wood cannot be formed under the bark, and that side of the tree ultimately dies. The seedling, on the other hand, is allowed, most commonly, to throw up a number of shoots from the ground or near it, one of which shades another. It is also saved the injury that the worked tree, procured from the nurseries, is too often exposed to in the careless lifting and packing, and transportation to a distance. The apple, too, suffers from the same exposure of its stem to the sun; and hence the frequent spotting and rotting of the fruit—which, however, is also occasioned by the fruit being left on the tree after it is ripe, many kinds retaining their hold upon the tree in this climate, which would drop to the ground to the northward. The pear suffers less from the cause in question than most other fruits. When thus exposed, it covers its naked and exposed stem either with a forest of suckers and sprouts, or with a rough, sealing bark, which however, is also formed at times even when the tree is sufficiently protected from the sun, but is evidence, we think, that the tree is not in a perfectly healthy condition."

THE MINIATURE FRUIT GARDEN; OR THE CULTURE OF PYRAMIDAL FRUIT TREES, WITH INSTRUCTIONS FOR ROOT PRUNING, &c. By THOMAS RIVERS, of the Nurseries, Sawbridgeworth, Herts, England. 5th Edition, 1858.

This little book of Mr. RIVERS has had a wide circulation in England, and been the means of disseminating many useful ideas on fruit tree culture. This last edition is greatly improved, both in contents and appearance.

METEOROLOGICAL JOURNAL, FOR THE YEAR 1852. By T. S. PARVIN. Muscatine, Iowa.

We are indebted to Mr. PARVIN for a copy of his excellent journal, and extract from it the following "miscellaneous remarks," which give some idea of the climate of Iowa:

Lowest temperature, January 19th, -23° . Highest, July 28th, 94° . Range of temperature 117.

Lowest height of Barometer, Feb. 24th, 28.75 inches. Thermometer (attached,) 40° . Greatest height of barometer, March 2d, 30.60 inches. Thermometer 21° . Range of barometer, 1.85. Mean height, 29.55.

Mississippi closed December 18th, opened February 24th. Closed 70 days: last year 22.

First frost, September 26th; last, May 20th. Cherry flowered May 9th, Apple and Peach, May 10th.

Total quantity of rain in inches, 58.7; 13.7 less than in 1851.

March 16th, hail storm P. M. In one hour preceding 3 P. M., the thermometer fell from 53° to 24° . On the 29th, at 9 A. M., for one hour it was very dark, (fowls retired to their roosts,) followed by rain, with thunder and lightning.

April 1st, ice one inch thick; and on the 4th a heavy sleet, very destructive to fruit buds.

September 26th, ice $\frac{1}{4}$ th inch thick.

November 19th. The only clear day in the month, and none for a month preceding and following it, and none in the month of December.

December 15th. From 2 to 3 P. M. the thermometer fell from 42° to 22° ,

THE FARMER'S COMPANION AND HORTICULTURAL GAZETTE is the title of a new monthly journal published in Detroit, Mich. Edited by CHARLES FOX and CHARLES BETTS. LINUS CONE Corresponding Editor. J. C. HOLMES Editor of the Horticultural Department. Price 50 cents a year. This is the second agricultural monthly in Detroit—a good indication of the prospects of rural art in Michigan. We wish it ample support.

THE WESTERN HORTICULTURAL REVIEW, for January and February is on our table. Published in the wine-making section of the country, on this subject the *Review* is particularly interesting. Its editor, Dr. WARDER, has done much to call attention to our native wine. Published at Cincinnati, by JOHN A. WARDER, M. D. \$3 a year.

The "COUNTRY GENTLEMAN," Mr. TUCKER's new weekly journal "for the Farm, the Garden and the Fire-side," is issued in beautiful style, and ably conducted. It is an excellent family paper, well deserving a place at the fire-side. \$2 a year.

THE FLOREST AND HORTICULTURAL JOURNAL for January is received. It is published at Philadelphia; edited by H. C. HANSON. The matter in this journal is good, but the publisher has hardly done it justice. Monthly, at \$2 a year.

CATALOGUES.—Descriptive Catalogue of Foreign and Native Evergreen and Deciduous Trees and Shrubbery, for shade and ornamental planting, by DAVID J. GRISCOM, Proprietor of the Evergreen Nursery, Woodbury, N. J.

Descriptive Catalogue of Hardy Trees and Shrubs, cultivated and for sale by ROBERT BUIST, Nurseryman and Seed Grower, Philadelphia.

R. BUIST's Select Catalogue of Rare and Popular Flowering Green-House, Hot-House and Hardy Plants, including new species lately introduced.

R. BUIST's Catalogue of Select Roses, and a Supplement of new and rare plants.

Those who intend to plant this spring, will find in these catalogues, and in our advertising sheets, abundant information as to where the various articles are to be found.

Answers to Correspondents.

I am more puzzled to get early radishes than any other article. Is it because I do not give them enough air? or that the seed is placed too near or too far from the glass? Bottom heat or not, they all run to tops. Do set me right in this matter. (1.)

You doubtless remember the beautiful effects produced in Germany by the *Sophora Pendula*. I want to know why this plant is so dear among us! the only one I ever could procure here of any size cost seven dollars! (2.)

My broccoli plants *all* failed to head the past season, both in the open ground and when carefully housed under glass, and this was the case for five miles around me. Why? Shall those in the pits be left there for sprouts or removed to the open ground, and must they be stripped of their leaves? (3.) *Treo.*

(1.) The want of air is the chief difficulty. It draws the stems up and prevents the growth of the roots. Keep near the glass, and as soon as the plants are fairly up, admit air at the top of the frame when the weather is mild enough. This point requires constant care in forcing.

(2.) One of the most graceful of weeping trees, but rather difficult to propagate and generally dear, though seven dollars is a round price and the specimen ought to be extra fine. We hope nurserymen will give this charming tree more attention. It must be grafted or inarched on tall, stout stocks of the common *Sophora*.

(3.) Probably owing to a late spring, or some other retarding cause in the early part of the season. We should not trouble with setting out again those that have failed to head in the pit. It would scarcely pay. It is a rather uncertain crop generally, in our warm summer climates.

CAN you give me an answer in the March number, what can be done to prevent the blight of the buds of the *Lamarque* rose? Will any spring trimming prevent it?

Also, to prevent the falling of figs when about half grown. Nine-tenths of ours fall. The soil is rich and thoroughly worked. Our trees stand in the vine border. (2.) A BALTIMORE SUBSCRIBER.

It happens occasionally that some of the Noisette roses which produce their flowers, as *Lamarque*, in very large clusters, seem not to possess sufficient force or vigor to develop all their buds fully. It occurs frequently in very cool and wet weather, and in very dry and hot weather. The old double yellow is more affected this way than any other variety we know. It is possible that thinning out the clusters of buds may enable the others to open better.

(2.) Can they suffer from drouth at the roots? or are they forced into an excessive growth? Either cause would be sufficient to make the fruit drop prematurely. We experience no such difficulty here, either from plants in pots or in the garden in common soil.

Does the cherry on Mahaleb prove entirely dwarf? How old are the oldest trees in this country, and how large? I have trees three years old but they are not very dwarfish for their age. At what age do they commence bearing full crops? J. R.—*Hagerstown, Md.*

The *Dukes* and *Morellos* are quite dwarfish on the Mahaleb, but the *Hearts* and *Bigarreaus* grow vigorously for several years. All require cutting back regularly to keep them in a dwarf form. They commence bearing at three and four years old, if on dry, light, and warm soil.

THE QUINCE.—The quince trees throughout a large extent of country have for several years, at least, been infested by an insect apparently of the moth species. Of the natural history, or even the existence of this minute animal, I have seen no notice whatever. The effects of its ravages, however, have been observed with disappointment and vexation by many a matron whose hopes of a full supply of this fruit have been sorely disappointed.

The presence of the enemy is usually indicated when the fruit is about half grown. The leaves of the tree lose their freshness and assume a russetty, reddish brown appearance. The growing shoots are feeble, with small leaves often curled at their edges, and soon cease to grow. The fruit becomes affected, grows but slowly, if at all, and much of it falls off before maturity. Even that which remains on the trees till autumn, is defective and almost worthless.

In searching for the cause of these effects, I have discovered a very small grey, or yellowish grey fly, or moth, mottled with specks or stripes of a darker color. I have not yet detected either the larva or chrysalis, but abundant marks of its action and what appeared to be fecal remains. These appearances, and the residence of the fly, is on the under side of the leaf.

A gentleman residing some distance from this place, succeeded in expelling these vermin from a small tree by throwing a sheet over it and burning several sulphur matches beneath. In a very few days that tree resumed its freshness and verdure, while all the others retain their unsightly aspect.

Will not you, Mr. Editor, or some of your able correspondents, give your readers full and practical information on this subject? A MISSISSIPPI SUBSCRIBER.

Undoubtedly an *aphis*. Fumigation with sulphur or tobacco, or sprinkling freely with tobacco water, will prove effectual.

IMPROVEMENT OF LAWNS.—In laying out my grounds, one acre in extent, two years ago, I was unable to obtain manure to mix with the soil at the time of plowing and seeding down to grass. My trees and shrubs being now planted, I cannot plow again nor can I obtain manure enough for a top dressing. Manure cannot be had here, at present, for love or money. My soil is a loam, with too great a proportion of clay. The grass seed and clover came up, but it has made a scanty growth and dries up in summer.

Now, sir, how can I best treat such a lawn to secure a more vigorous growth of grass, and a better verdure in mid-summer? I have a barrel of poudrette and can procure guano, coal dust, ashes, &c.; but if the first two of these are applied in the spring, will they not burn the grass in summer?

Again, Would it not be advantageous to cut sods from the roadside in spring, and after rotting them thoroughly, or burning them, apply them in summer as a top dressing? Would not this serve to absorb moisture from the air, and protect the roots of the grass from the heat of the sun?

Please tell me, in your next number, the best thing I can do, under the circumstances, for my lawn. A. D. G.—Clinton, N. Y.

It is almost impossible to sustain a good midsummer verdure on a badly prepared soil, even with the most liberal top dressing, unless it be drenched daily with water. We think if your lawn were ours, we should trench it eighteen inches deep, (especially that part nearest the house) apply poudrette, or other enriching composts, and seed down anew with pure *red top* grass. A shallow plowed, clayey soil, breaks and cracks in dry, hot weather, and the grass dies out. A lawn is a permanent affair, and it is annoying to have it, year after year, show the effects of a bad bottom, and to be continually applying some temporary relief without satisfactory results. You may try it with a top dressing of poudrette early in the season, before the spring rains cease, or the weather becomes warm. Then in mid-

summer give it two or three good drenchings with weak guano water. A good compost of decayed leaves, muck, &c., with poudrette, would be better than poudrette alone, as it could be laid on thick enough to form a coating that would protect the roots.

INSECTS.—A correspondent at Baldwinsville sends us some shoots of an apple tree, on which are several clusters of long, narrow, grayish cocoons, each containing a small moth from an eighth to a tenth of an inch long. He says they are very abundant in some orchards in that neighborhood. We add a drawing of the shoot; perhaps some of our readers may know something about them.



EVERGREEN TREES.—A correspondent in Illinois asks: "What are the six best evergreen trees, taking into consideration *beauty of form, hardiness, and vigor of growth?*" We reply, Norway Spruce (*Abies excelsa*), European Silver Fir (*Picea pectinata*), Lofly Pine (*Pinus excelsa*), Austrian Pine (*Pinus Austriaca*), Siberian Arbor Vitæ (*Thuya Siberica*), Deodar Cedar, (*Cedrus Deodora*).

The above are all hardy, rapid growing, beautiful trees, and combine a variety of characteristics in habit, foliage, &c. If any doubts be entertained as to the entire hardiness of the Deodar in the climate where they are to be planted, (it is hardy here,) we would suggest either of the following instead: Himalayan Spruce (*Abies morinda*), Hemlock Spruce (*Abies cinnamensis*); Red Cedar, (*Juniperus virginica*).

(J. R. S., Clarksville, Ga.) The *Angers* quince is a rapid, vigorous growing variety, with longer and stronger shoots, and larger foliage than the common sort.

The *Paris* or *Fontenay* stock is also vigorous, but does not make such long shoots, nor are the leaves quite so large. We consider it equally good for a pear stock.

The *Paradise* is a dwarf species of apple that makes the most dwarf trees of any other stock used.

The *Doucain* holds an intermediate place between the *Paradise* and free stock, and is used where small standards or pyramidal trees are wanted.

The *Mahaleb* is a small species of cherry, (the perfumed cherry,) bears small, dark colored fruit about the size of a garden pea. It exercises a similar influence on the cherries worked upon it as the quince does upon the pear.

Roses are sometimes budded or grafted, because they can be more easily propagated in that way, and, in some cases, are better adapted to particular soils and modes of culture. *Moss* varieties and *Hybrid perpetuels* are budded more than others. The *Teas*, *Noisettes*, and *Bengala*, are easily propagated from cuttings. As a general thing, roses are preferred on their own roots, but if the stock be a suitable one, the worked ones are just as good, and, in many cases, produce more abundant and better blooms.

(H. H. R., Rondout, N. Y.) Cherries should be grafted early, say in March, in your climate.

(D. M. L., Ancaster, C. W.) **BOOKS.**—*Downing's Landscape Gardening and Country Houses*.

SHRUBBERY.—It was composed of a miscellaneous collection of popular shrubs planted closely, requiring no hosing or culture.

Horticultural Societies.

PENNSYLVANIA HORTICULTURAL SOCIETY.—*Annual Meeting*.—The Annual Meeting of the Society was organized by calling C. COPE to the chair, and appointing CHAS. P. HAYES Secretary.

The object, as stated by the Chair, to be the election of officers, Messrs. E. MEREDITH and J. F. KNOER, were appointed tellers; who reported, after balloting, that the following gentlemen received the highest number of votes; whereupon the Chair announced that they were duly elected for the ensuing year:

President—GEN. ROBERT PATTERSON.

Vice Presidents—JAMES DUNDAS, JOSHUA LONGSTRETH, E. W. KEYSER, W. D. BRINCKLE.

Treasurer—JOHN THOMAS.

Corresponding Secretary—THOMAS C. PERCIVAL.

Recording Secretary—THOMAS P. JAMES.

Professor of Entomology—SAMUEL S. HALDEMAN, A. M.

Professor of Botany—WILLIAM DARLINGTON, M. D.

Professor of Horticultural Chemistry—ROBERT HARE, M. D.

Stated Meeting, February 17, 1853.—The stated meeting was held as usual, on Tuesday evening, in the Chinese Saloon. The President in the chair. To the numerous visitors in attendance on the occasion, the exhibition assuredly afforded much gratification. Many choice specimens of green-house plants were shown in the collections from four of our best conservatories. Among them a fine plant of the *Acacia pubescens* in full flower, from Gen. PATTERSON's house, stood prominent. A very well grown specimen of *Chorozeuma verum* in rich bloom, was seen in WM. W. KEEN's display, from West Philadelphia. FREDERICK LENNIG's garden exhibited a fine table of Camellias and another of choice plants. Among the Camellias was a plant of the famed *Ducea Viscontea*, displaying a beautiful flower and seen for the first time. On the table furnished by R. BUIST's foreman, were many choice plants, two of which were not seen before at our meetings, the *Epacris candidissima* and *E. minута*. In Mr. COPE's collection of select plants was a handsome *Abutilon Striatum*, and a new species, *Begonia Alba-coccinea*. Cut flowers of Camellias were brought from Mr. BUIST's, Mr. SHERWOOD's, Mr. LENNIG's and others. Designs and baskets of cut flowers were presented from C. COPE, R. CORNELIUS and R. KILVINGTON.

THOMAS HANCOCK exhibited fine *Easter Buerre* pears. Mrs. SMITH's gardener, five dishes of pears. M. W. ROE, two kinds of apples, and ROBERT CORNELIUS' gardener, three varieties of apples.

On the vegetable tables were to be seen from Mr. COPE's forcing houses—cucumbers, French beans, tomatoes and mushrooms. From Mr. FISHER's—fine cucumbers, mushrooms, lettuce, &c. From R. CORNELIUS', many good culinary articles. THOS. F. CROFT presented a fine display of rhubarb.

Premiums awarded were as follows:

Camellias—For the best six plants to JOHN POLLOCK, gardener to F. LENNIG; for the best six cut flowers to THOS. FAIRLEY, foreman to R. BUIST; for the second best, to ISAAC WARR, gardener to JOHN SHERWOOD. *Primula sinensis*—for the best six plants, to BENJ. GULLISS. *Plants in pots*—for the best twelve, to JOHN POLLOCK, F. LENNIG's gardener; for the second best, to WM. GRACEY, gardener to WM. W. S. KEEN, West Philadelphia; for the third best, to THOS. FAIRLEY, R. BUIST's foreman. *Plants in a pot*—for the best, the *Acacia pubescens*, to ISAAC COLLINS, gardener to Gen. PATTERSON. Plants shown for the first time, a special premium of \$2 to R. BUIST's foreman, for *Epacris minута* and *E. candidissima*. Another of \$1 to THOS. MEEHAN, gardener to C. COPE, for *Begonia Alba-coccinea*. *Bouquet design*—for the best, to THOS. MEEHAN; for the second best, to THOS. MEEHAN, gardener to R. CORNELIUS. *Basket of cut flowers*—for the best to WM. HAMIL, gardener to Mr. FISHER; for the second best to R. KILVINGTON. And for a beautiful display of hyacinths, a special premium of \$2 to PETER RAARE. The Committee specially notice a fine

specimen of the *Camellia*, variety *Ducea Viscontea*, from F. LENNIG's, an Italian variety, and shown for the first time. Also a plant of *Cypripedium acaule*, a native, shown by H. C. HAUSON.

Pears.—For the best ten specimens—*Easter Buerré*, to THOS. HANCOCK; for the second best, *Glout Moreaux*, to F. GUOIN, gardener to Mrs. J. B. SMITH.

Apples.—For the best ten specimens—*Newtown Pippin*, to N. W. ROE; for the second best, the same kind, to R. CORNELIUS' gardener.

Vegetables.—For the best display of an amateur gardener—to WM. HAMILL, gardener to Mr. FISHER; for the second best, to THOS. MEGHEAN, gardener to R. CORNELIUS; and a special premium to T. S. CROFT for a very handsome display of rhubarb, containing five named varieties.

An interesting ad interim report from the Fruit Committee was submitted, of the objects shown before them since the last stated meeting.

The President appointed the Committees for the ensuing year.

Ordered, That the thanks of the Society be tendered to M. P. WILDER, of Massachusetts, for the gift of a copy of Dr. HARRIS' Report on Insects injurious to Vegetation, last edition, and the Proceedings and Reports of the Massachusetts Board of Agriculture.—*Evening Bulletin*.

ALBANY AND RENSSELAER HORTICULTURAL SOCIETY.—*Annual Meeting, Feb. 16*.—The following officers were elected for the ensuing year:

President.—HERMAN WENDELL, M. D., of Albany.

Vice Presidents.—HENRY VAIL, of Troy, C. P. WILLIAMS, of Albany; E. DORR, of Albany; WM. NEWCOMB, of Rensselaer.

Secretary.—JOS. WARREN, of Albany.

Treasurer.—LUTHER TUCKER, of Albany.

Managers.—B. B. KIRTLAND, V. P. DOUW, L. MENAND, J. S. GOOLD, E. CORNING, jr., J. M. LOVETT, E. E. PLATT, W. A. WHARTON, JAS. WILSON.

There was a fine exhibition of fruits, green-house plants, and cut flowers. The premiums were awarded as follows:

PREMIUMS.—Flowers.—For best six plants, of different varieties, in pots, [for *Arbutus Andrachne*, *Erica rubrida*, *Fuchsia hero*, *Azalea alba*, *Cantua cicolor*, *Acacia floribundia*,] L. MENAND, Albany, \$3. For the best and most beautiful display of cut green-house flowers, L. Menand, Albany \$3; second best, V. P. DOUW, \$2.

Camellia Japonica.—For best display of cut flowers with foliage, JAMES WILSON, Albany, \$3. For the best six varieties, [for *Miniata*, *Fordii*, *Double White*, *Wilderii*, *Landrethii*, *Carswelliana*,] E. CORNING, jr., \$2. For best three varieties, [for *Carswelliana*, *Landrethii*, *Double White*,] L. MENAND, \$1.

Chinese Primroses.—Best six varieties, in pots, Mrs. JAS. GOOLD, \$2. Best three varieties, in pots, E. CORNING, jr., \$3.

Pansies.—Best ten distinct varieties, in pots, J. DINGWALL, Albany, \$2.

The committee also wish to commend the displays of plants, in pots, of Mr. JAS. WILSON, JOEL RATHBONE, Esq., E. CORNING, jr., and J. DINGWALL, all of whom exhibited choice specimens, showing much skill in growing.

Floral designs, bouquets, &c..—Best round hand bouquet, J. WILSON, Albany, \$3. Best large flat mantle bouquet, J. WILSON, Albany, \$2. Best flat hand bouquets, E. CORNING, jr., Albany, \$2. Best basket flowers, J. DINGWALL, Albany, \$2.

The Committee recommend a discretionary premium of \$2 to Mrs. J. W. HINCKLEY, of Albany, who exhibited one large vase and two mantle bouquets of dried grapes, arranged with great taste.

Vegetables.—There was exhibited by H. SLACK, M. D., of Guilderland, Western Red, Pink Eye and Mountain June potatoes, turnips and Long Blood beets. By J. B. HURSON, cabbages, carrots, parsnips, leeks, celery, and beets, all very fine. By V. P. DOUW, very fine Silesia lettuce. By JEFFERSON MAYELL, three varieties of lettuce, very fine. C. E. GOODRICH, of Utica, a large collection of Seedling Winter potatoes, of very fine appearance.

PREMIUMS—For best show of vegetables, to J. B. HUTSON, \$2. Best half peck of winter potatoes, to Dr. HENRY SLACK, of Guilderland, \$1. The largest exhibition of lettuce to J. MAYELL, \$1. For best lettuce shown to V. P. DOUW.

The interest involved in the specimens of Seedling Potatoes exhibited by C. E. GOODRICH, of Utica, requires more attention and a more careful investigation than the Committee are at this time prepared to bestow, but they beg to return to Mr. GOODRICH the thanks of the Society for his exhibition.

WINTER SHOW OF FRUIT AT ALBANY.—The display of fruit at the Winter Meeting of the New York State Agricultural Society was not large, but very fine. The committee of arrangements had made ample and comfortable preparations both for exhibitors and visitors; and all present seemed to enjoy the occasion. We give the following report from one of the daily journals, the *Albany Register*:

There was exhibited at the Hall of the State Agricultural Society yesterday, the greatest variety of winter fruit ever collected in this city. The great bulk on exhibition came from the western part of the State, and but little from this section.

ELLWANGER & BARRY, of Rochester had the greatest variety of Winter Pears, numbering 40 different kinds. It is said to be the greatest variety ever exhibited in the United States. They also had 88 varieties of Winter apples, embracing some of the choicest fruits. T. G. YEOMANS, Walworth, Wayne county, 6 varieties of apples and 2 of pears. N. & E. S. HAYWARD, Brighton, Monroe county, 26 varieties of apples 2 specimens of Isabella grapes—one kept in saw-dust and the other in cotton. The former appeared the best preserved. ISAAC MERRITT, Penfield, Monroe county, three varieties of apples. F. W. LAY, Greece, Monroe county, 11 varieties of apples. ROBERT BROWN, Greece, Monroe county, 20 varieties of apples. A. FROST, Rochester, 24 varieties of apples. Judge BURL, Rochester, 5 varieties of apples. J. H. WATTS, Rochester, 5 varieties of apples.

The Society did not offer any valuable premiums for Fruit; but the committee were of the opinion that the Executive Committee might be induced to give a few to those who have shown so much zeal in getting together the greatest variety and choicest kinds of Winter Fruit. The following premiums were awarded:

Pears.—ELLWANGER & BARRY, large Silver Medal.

Apples.—ELLWANGER & BARRY, Diploma, copy of Downing's Fruits; T. G. YEOMANS, copy Barry's Fruit Garden; J. H. WATTS, Rochester, copy Thomas on Fruit; A. FROST, Rochester, copy Downing's Fruits; JOHN S. GOOLD, Albany, copy Barry's Fruit Garden; E. S. HAYWARD, Brighton, Monroe Co., Diploma and Downing's; ISAAC MERRITT, Penfield, copy Thomas; F. W. LAY, Greece, copy Downing; ROBERT BROWN, Greece, Diploma and Downing; J. J. THOMAS, Macedon, Wayne Co., Diploma and Barry's Fruit.

Grapes.—N. C. HAYWARD, Greece, copy Barry's Fruit Garden.

We hope the Society will hereafter encourage these winter exhibitions, as the late one has afforded a very satisfactory demonstration of their utility.

ANNUAL MEETING OF THE GENESEE VALLEY HORTICULTURAL SOCIETY.—This meeting was held on the 5th of February. The following officers were chosen for the ensuing year:

President.—J. J. THOMAS, Macedon.

Vice Presidents.—L. WETHERILL, Rochester; H. P. NORTON, Brockport; R. G. PARDEE, Geneva; Mr. JEFFRY, Canandaigua; SAMUEL SHADBOLT, Wheatland.

Recording Secretary.—JAS. VICK, JR., Rochester.

Corresponding Secretary.—H. E. HOOKER, Rochester.

Treasurer.—JAMES H. WATTS, Rochester.

Committee.—On *Fruits*—P. Barry, H. E. Hooker, John Donellan, J. W. Seward, E. S. Hayward, L. A. Ward, J. W. Bissell, H. N. Langworthy, L. B. Langworthy, Zera Burr, Geo. Ellwanger, Alonzo Frost.

On Trees and Shrubs.—W. A. Reynolds, Wm. Webster, R. Donellan, W. King, Joseph Frost, C. F. Van Doorn.

On Entomology.—L. Wetherell, J. W. Seward.

On Vegetables.—John Donellan, James Vick, Jr., Horace Hooker, James Buchan.

On Botany.—L. Wetherell, Francis Trentman, Moses Long, Chester Dewey, G. H. Smith, P. Cooney.

On Finance.—John J. Thomas, L. Wetherell, J. Vick, Jr., J. H. Watta.

Executive Committee.—J. J. Thomas, L. Wetherell, P. Barry, W. A. Reynolds.

There was a very nice display of winter apples and pears; and some of the best preserved *Isabella* grapes we have seen were presented by Mrs. M. JEWELL, of Rochester. Among the apples we saw none so remarkable as *Newtown Pippins*, the largest and fairest we have seen shown, by Mr. R. H. BROWN, of Greece. The committee report as follows:

REPORT OF FRUIT COMMITTEE—WINTER EXHIBITION.—MESSRS. ELLWANGER & BARRY, Mt. Hope Nurseries, exhibited 83 varieties of pears and 24 of apples. JAS. H. WATTS, Rochester, *Northern Spy* apples. R. H. BROWN, Greece, 22 varieties apples. MESSRS. A. FROST & CO., Genesee Valley Nurseries, 18 varieties apples. H. WHITE, Rochester, 8 varieties of apples. S. MILLER, Rochester, *St. Jermain* pears. MRS. M. JEWELL, Rochester, *Isabella* grapes in a most beautiful state of preservation. MESSRS. BISSELL & HOOKER presented a new and promising variety of apple—name unknown to the Committee.

MASSACHUSETTS HORTICULTURAL SOCIETY.—The following are the officers of this Society for the present year:

President—JOSEPH S. CABOT.

Vice President—BENJ. V. FRENCH, CHEEVER NEWHALL, EDWARD M. RICHARDS, JOSIAH STICKNEY.

Treasurer—WM. R. AUSTIN.

Corresponding Secretary—EBEN. WIGHT.

Recording Secretary—W. C. STRONG.

Professor of Botany and Vegetable Physiology—JOHN LEWIS RUSSELL.

Professor of Entomology—T. W. HARRIS.

Professor of Horticultural Chemistry—E. N. HORSFORD.

STANDING COMMITTEES.—*On Fruits*—E. Wight, Chairman; J. Lovett, C. M. Hovey, W. R. Austin, F. L. Winship, W. C. Strong, Joseph Breck.

On Pioneers.—J. Breck, Chairman; A. McLennan, E. A. Story, T. Page, A. Bowditch, G. Evarts, F. Burr.

On Vegetables.—H. Bradlee, Chairman; D. T. Curtis, A. C. Bowditch, G. E. White, A. W. Stetson.

On Library.—C. M. Hovey, Chairman; H. W. Dutton, W. R. King, A. R. Pope, R. M. Copeland, Librarian.

On Synonyms of Fruit.—M. P. Wilder, Chairman; P. B. Hovey, R. Manning, S. Walker, E. Wight.

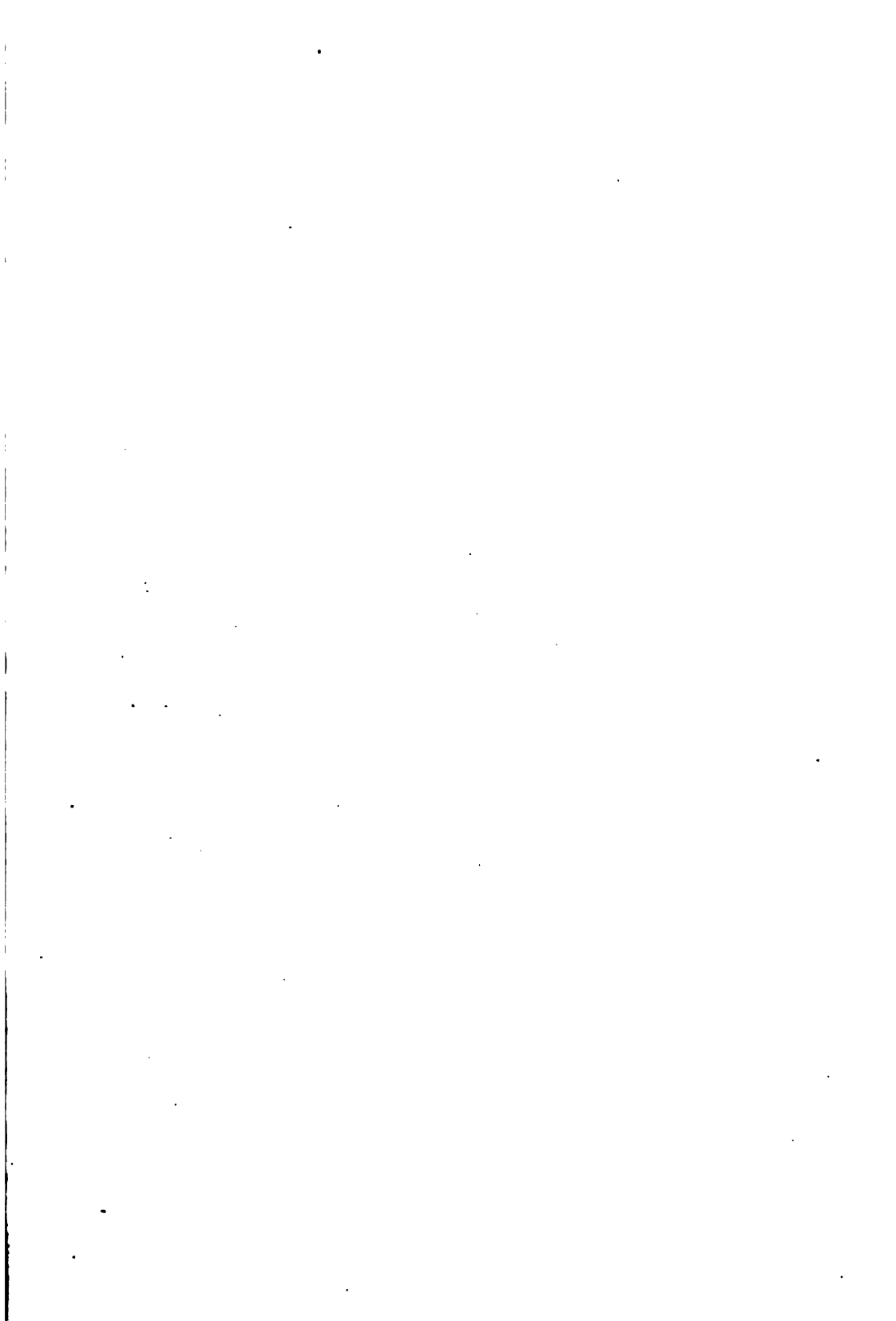
Executive Committee.—J. S. Cabot, Chairman; W. R. Austin, M. P. Wilder, S. Walker, P. B. Hovey.

For Establishing Premiums.—Eben. Wight, Chairman; J. Breck, H. Bradlee, Josiah Lovett, P. B. Hovey.

On Finance.—M. P. Wilder, Chairman; J. Stickney, O. Johnson.

On Publications.—E. Wight, Chairman; J. Lovett, J. Breck, H. Bradlee, C. M. Hovey, W. C. Strong, F. L. Winship.

On Gardens.—J. S. Cabot, Chairman; E. Wight, J. Lovett, S. Walker, J. F. Allen.





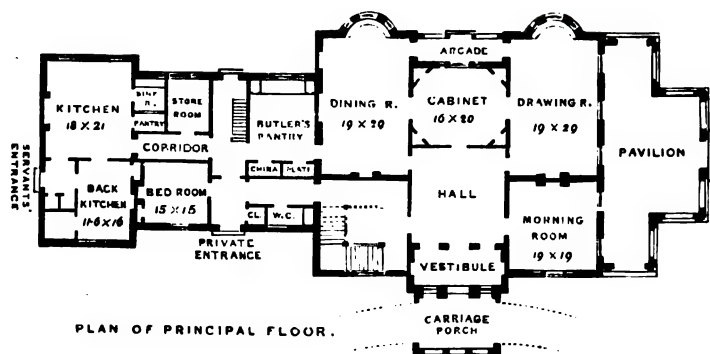
1 Early French Short-Horn Carrot.

2 Chinese Rose Winter Radish. 3 Early Oval Rose Radish.

DESIGN FOR A MARINE VILLA.



ENTRANCE FRONT.



SEA FRONT.

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the first of these is the fact that the system is not closed. The system is open to the environment, and the environment is open to the system. The second is the fact that the system is not isolated. The system is in contact with the environment, and the environment is in contact with the system. The third is the fact that the system is not homogeneous. The system is composed of different parts, and the environment is composed of different parts. The fourth is the fact that the system is not uniform. The system is not the same everywhere, and the environment is not the same everywhere. The fifth is the fact that the system is not static. The system is changing, and the environment is changing. The sixth is the fact that the system is not deterministic. The system is not predictable, and the environment is not predictable. The seventh is the fact that the system is not linear. The system is not straight, and the environment is not straight. The eighth is the fact that the system is not simple. The system is complex, and the environment is complex. The ninth is the fact that the system is not easy. The system is difficult, and the environment is difficult. The tenth is the fact that the system is not perfect. The system is imperfect, and the environment is imperfect.

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The Kitchen Garden.



VEGETABLES, and their cultivation, are now attracting much attention; information is eagerly sought, as we have abundant evidence in the number of inquiries we are almost daily receiving. The hints we now propose to offer are intended for amateurs, and have reference particularly to open ground culture. Whoever wishes to make his kitchen garden a profitable and pleasant investment of care and labor, must remember—

First, That it be free from stagnant moisture, either in surface or sub-soil,—a cold, sour bottom is a deadly foe to a rapid, luxuriant growth, which is indispensable. A drain or two of stone or pipe tile, that a good laborer will make in a couple of days, may remedy defects of this kind in many a garden now suffering. A garden with a perfectly dry bottom, is two or three weeks earlier than one from which water cannot find easy drainage; it is much more healthy, more agreeable to work in, and more productive.

Second, That the ground be deeply spaded or trenched, or if of large extent, *sub-soil plowed*. In any case it ought to be thoroughly loosened and pulverized to the depth of eighteen inches at least, that the roots of plants may have ample sources of food and nourishment at all times, and especially in *dry times*. This should have been done in the autumn; but if overlooked then, it should be done now, for it is indispensable. In spading and trenching, the subsoil should not be thrown on the *top*, for that would make a bad bed for the seeds, but it should be well loosened. In connection with this operation, *abundance* of well decomposed manure should be added, and it should be placed in the bottom of the trench as the work proceeds. Some of the coarser crops, such as potatoes, will do as well on *partially* decomposed manures, and these for early spring crops are desirable on account of the bottom heat to be derived from their fermentation.

Third, The garden must be laid out in plots, and each one should be designated by letters or numbers and have a certain crop or succession of crops assigned it, as the farmer arranges beforehand the mode of cropping the various divisions of his farm. Be the garden ever so small, a well defined system will add greatly to the facility and success of its management. Good gardeners and men whose gardening habits have become orderly and systematic from long practice and experience, may consider these hints superfluous, but we know they are needed, and if followed might work great reformation in many of what are called *good* gardens. We all know how common it is for garden work to be deferred until an advancing season, or an active neighbor suggests the necessity of immediate action. *Then* the plot that is most available is put hastily in order and sown or planted with the most pressing article. A week or two more and another plot is taken up in the same way, and so it goes on at random as the season advances.

Fourth, A timely provision of an ample and well selected stock of seeds should be

made. The amateur who is not familiar with the best varieties of vegetables, should consult some reliable treatise on the subject, or go to an honest, well informed seedsman, and select such an assortment as will be sufficient for an uninterrupted succession during the entire season. No one should be satisfied with a poor assortment of suspicious seeds, merely because they are at hand. Conveyances now offer such facilities that a package can be transmitted one thousand miles in as short a period as it could twenty a few years ago. Therefore send a thousand miles, if need be, to secure good reliable seeds of the *very* best articles. You may depend upon it this will be economy in the end. The practice of running to the nearest seed vender to-day, for an ounce of this, and next week for an ounce or a paper of that, can result only in loss of time, and labor, and land.

About selecting varieties we must say a word or two more. This point in kitchen gardening does not seem to be appreciated. A *thousand* people will inquire the best varieties of apples, and pears, and peaches, before *one* will ask the best kind of radish, of lettuce, or pea; and yet the question has an equally important bearing on success in the one case as in the other. The varieties of garden vegetables are participating to some extent in the general improvement of all branches of horticulture. A very small number of those who have gardens look into these matters. They are not aware of the introduction of new and improved varieties; they imagine that the seedsman will be able to meet their wants: but the seedsman provides such seeds as he can sell, and he seldom lays in a stock of new or rare things until the taste of his customers demands it. We are not to be understood as recommending people who aim at sure and abundant crops, to dabble in novelties merely because they are such, but simply that they should secure the *very best* that can be had, availing themselves of every improvement that has been made, as people do in other pursuits.

Another matter that requires special consideration in the selection of seeds, is their adaptation to certain seasons of the year, and to other circumstances. For the early spring crops we want such as accomplish their growth in the shortest possible period of time. One variety of pea will be fit for use a fortnight before another sowed at the same time and on the same bed. So it is with radishes, lettuce, cabbage, cauliflower, and indeed all the leading articles. Many people say a few days, or a week, is of so little importance that their very early varieties are not worth the trouble—that they are generally not very productive, and it is better to wait the maturity of the more prolific sorts. This spirit deprives many people of much of the gratification which the garden might afford.

The next most important thing is to arrange the different sowings, in regard to quantity and time, in such a way that there will be continually a full supply in a proper condition for the table. This is a point in regard to which we know from experience, neither gardeners nor amateurs give sufficient attention. For instance, in the case of radishes. These are very seldom seen in a fit state for the table; they are allowed to attain their full size, when they are so tough and pungent as to be wholly uneatable. They are only good when very young and tender; and if those who go to the markets, knew what a radish ought to be, they would not choose the

largest, which strange to say they generally do. The great error is in sowing too much seed at once. The amateur who merely looks to a family supply, should sow a very small quantity at a time, and repeat it every week, or oftener as long as radishes are wanted. Then they should be used the moment they are fit. When a large bed is sown at once, three-fourths of them have to be thrown away; in fact only two or three dishes are secured in a proper state. This point, we repeat, deserves the utmost attention. We frequently hear people say, "we have so many vegetables that we are at a loss how to dispose of them," when the truth is they have scarcely anything but what should be thrown to the hogs. Finally, in the kitchen garden everything must grow with *rapidity* and luxuriance. The seed must be good to vegetate quickly and produce plants with a sound and vigorous constitution. Old and poor seeds, with a half extinguished vitality, will produce such weakly and delicate plants that the most generous treatment will fail to bring them to perfection. See then that your seeds are large of their kinds, full and plump. Then the soil must be warm, and moist, and rich. *Rich* it must be, or you may as well throw your seeds on the way-side. It must also be kept clean and mellow, or friable. Weeding and hoeing are two operations that require daily attention. Weeds, even if small, absorb the food and moisture that belong to the crops, and the absence of the hoe soon shows itself in a crusty surface that interrupts the free process of growth. Kitchen garden plants are not like trees, that can send their powerful woody roots in all directions in search of food; their roots are delicate and fibrous, great feeders, requiring abundant, exhaustless supplies. The lettuce and cabbage tribe are especially food of good living and cannot do without. No matter what sort of lettuce you may plant upon poor soil, depend upon it it will lack that icy crispness and delicacy of flavor that constitutes its chief excellence. A liquid manure tank is one of the necessities of the kitchen garden, and its contents should be freely and frequently applied. Any soluble manure may be used with rain water. *Guano*, when other manures are scarce, may be advantageously employed. A bag of fifty or one hundred pounds will be as good as several loads of manure, and it is so portable that it may be conveyed one thousand miles at a trifling cost. It is so easily applied too; a handful thrown into a pail or tub of rain water and dissolved, will make a capital stimulant for growing plants.

It is not necessary, nor can we spare the space, to enter into all the minutiae of operations. Our purpose at present is to direct attention to the principles that should regulate the management of the kitchen garden, and to enforce the adoption of a *system*, without which no cultivation can be pleasant, creditable, or profitable. We must mention two or three fine things that are particularly worthy of attention. Our colored plate for this month exhibits —

1. The *Early Oval Rose* radish, the best for forcing and for an early crop that we have ever seen. They should be eaten when about the size figured in the plate. They attain maturity, or at least a proper size for use much quicker than the common *Early Franks* or *Long Scarlet*, which answer very well in the open ground later in the season.
2. The new *Chinese Rose Winter* radish, far superior in appearance as well as in tenderness and delicacy to any other winter sort, and keeps well.

3. The *Early Very Short-Horn* carrot, much the best for forcing and for an early crop. They may be sown, mixed with the *Early Oval* radish, in the same bed, and will be fit for soups in a very short time. They are used quite small. Large quantities of them are sent from France to London where we first saw them, not much larger than the figure of the *Oval* radish. It is quite distinct from the common *Early Short-Horn*. A writer in the *London Gardener's Chronicle* says :

"It does not appear to be known either to seedsmen or gardeners generally, that this carrot, of which there are so many brought from France into Covent Garden market in the early part of the season, is easy of cultivation, and more suited to some soils than those grown in this country. Carrots in a young state are at all times of the year in great request here; and this one, on account of its shape and form, its being of finer texture and flavor, is much preferred to any of the others for ornamental cookery: therefore I find it a great acquisition. I have found it a much faster grower than the common *Early Horn*. To prove this, on the 15th of August I sowed, on a well prepared piece of ground, two beds, one of each sort, side by side. They vegetated and came up as nearly as possible at the same time, but I find now (Nov. 4) that the *French Horn* is nearly double the size of the other."

This corresponds with our own experience the past season.

Among the great variety of peas now grown, we believe the *Prince Albert* is the earliest, though there are extra early sorts advertised, some of which may be earlier. Of bush beans, the *Early Six Weeks* is a good popular sort, but the *Early Mohawk* resists cold weather better. Of beets, the *Early Bassano*—a round, red sort—is the best for an early crop. Of cabbages, the old *Early York* is about as good for the first sowing as any yet introduced. Of brocoli, *Early Purple Cape*. Of cauliflower, the *Walcheren Early*. Of celery there is nothing better than the *genuine* white solid. The dwarf curled kale, or "German greens," is becoming popular, and is really a useful article in late autumn and winter or early spring. It requires to be pretty well acted on by the frost before it acquires that tenderness which fits it for use. The curled cress, or pepper cress, is a nice spring salad that may be grown fit for use in a day or two when in a hot-bed. To keep up a supply, constant sowings are necessary. Of sweet corn several varieties have recently been introduced that deserve a trial. The *Stowell* is very fine; remains tender and good a long time, but difficult to keep so in winter. The *Old Colony* and some other sorts are highly spoken of, but we have not tried them. Of lettuce the hardiest sort for early use out door, is the *Brown Cos*, and for forcing in frames the *Early Cabbage*. Both these sorts are well known. Of leek, a very useful article, there is none like the *Large Rouen*. Of endive, the *Green* and *White Curled* for salads are excellent, grown and used as lettuce. The broad-leaved sorts form heads, and are used for cooking. Okra is becoming popular, and in all families where soups are appreciated it is very valuable. The pods are used while green and soft. This is one of the principal ingredients of the famous gumbo soup we get in the south. Of parsley, the extra curled variety is very fine. With a little attention every table might have a supply of this during the year, and no good gardener will consider his daily stock complete without it. Were it only for

garnishing dishes, it is indispensable among people of taste. Rhubarb, or pie plant, has become too popular to need any recommendation; for early spring use it should be coaxed into rank growth by a coat of warm stable manure. Sea kale is one of the neglected culinary plants; it is as easily grown as rhubarb; the spring shoots require to be blanched by a covering of some sort. Globe artichokes are very little known, except in a few of the best gardens. Around Angers, in France, they are grown almost as extensively as wheat in the Genesee valley; the markets are full of them, and one would suppose the people almost lived upon artichokes; they are sure to appear on every dinner table, and are excellent. In our northern climate they will require protection in winter, but by taking extra pains they may be grown successfully.

ANNUALS, AND THEIR CULTIVATION.

PERHAPS many well versed in floriculture will think that this article is not worth the paper on which it is printed—that it states facts as familiar to them as household words, and which they learned among their first lessons in this branch of horticulture. To such we say, this article is not intended for your benefit, yet we hope you may glean some things that will repay perusal. But you must remember there is now felt an awakening interest on the subject of floriculture, wide and extended as our almost boundless country. Hundreds—yes, thousands, and tens of thousands, are acquiring taste on this subject, and thirst for knowledge as the panting hart for the running brook. These begin to see beauty in waving trees and woodland flowers, where before they saw no comeliness. As taste becomes cultivated and refined, beauty is created on every side—the mossy dell, the thorny rose, the simplest flower that adorns the meadow, speak a new and beautiful language, and tell of a new and beautiful world. Enthusiasm is enkindled—every means is taken to explore this new creation. Of the nature and extent of this feeling we have some opportunity to learn. To it do we ascribe the increased demand for horticultural reading, and the largely increased circulation of this journal. And this increase is not principally among professional horticulturists, and farmers, who are turning their attention to horticulture as a business, but among amateurs, merchants and mechanics, who are beginning to devote their spare moments to this beautiful and healthful employment—and particularly the ladies, who ever have been and ever will be lovers of the beautiful. Ladies are the natural patrons of flowers, the world over. And sometimes when we have seen the wealthy farmer, with his hundreds of broad acres, begrudging wife and daughters a few rods of ground for the cultivation of flowers, complaining that the “hired man” lost a whole day in spading it up, we have “said in our haste,” man is too coarse, too much like his ox, ever to *love* flowers. We pity the man who has traveled far on the journey of life without stopping to do them homage.

One lady writes—“Give us the best and simplest directions for cultivating the finest of our common flowers, particularly annuals; such as are within our reach. While

we love to read of the beautiful and costly flowers that year after year make their appearance in the floral world, do not forget the wants of those who live far away in the west, and far from places where such things can be obtained, and yet who love flowers as ardently as those who are more favorably situated for its gratification." This hint we shall remember, as it accords with our own feelings. We love flowers—we almost worship these children of the field. We love to enter the conservatory and there behold the dazzling array of beauty, gathered from every land and every clime,—but we love equally well to enter the little cottage garden and witness how taste can render lovely the humble abode of poverty. How beautiful is the cottage embowered in vines and roses. It is decorated with nature's own drapery; the rich green of the foliage—the brilliant blossoms—the delightful fragrance—all combine to render this an enchanted spot. The poet must have had such a "home" in view when he sung—

"An exile from home, splendor dazzles in vain;
And I sigh for my lonely thatched cottage again."

Strip from the cottage the honeysuckles, the running roses, the jasmines, and it is a poor affair—old, rough, and unsightly. All can afford to surround their homes with flowers; no one can afford to have a barren and desolate home.

But we started to talk of Annuals and their Cultivation, and must confine ourselves to the subject.

The first work is the selection of the ground and its preparation. A warm and sheltered position should be chosen, if possible, as on the south side of a fence; but care must be taken to select a place on which water will not stand. The ground should be deeply dug and well pulverized. If not rich, well rotted manure should be dug in. If the ground is clayey, and liable to become hard by the beating of the rain and the drying sun, some light mold from the woods should be added, or some sandy loam, or mold from an old pasture; one of which can be procured in almost any neighborhood.

After the ground is prepared the seed may be sown; but, a little caution is necessary not to sow seed too thick, as beginners generally make this error. As there is some difficulty in sowing the finer seed evenly, they may be mixed with three or four times the quantity of sand or ashes. They may be then lightly covered with fine mold, sifted over them—the smaller the seed, the lighter the covering. It is better to cover too lightly than too heavily. You have now nothing to do but to wait patiently till they "*come up*." Be sure and destroy all weeds as fast as they make their appearance. If your plants are too thick, which they are very apt to be, transplant them to other beds, or along the borders of the paths, choosing some showery day for this work. But be sure and remove them before the plants in the bed become crowded, or they will become injured—taking out the smallest and weakest plants. In removing plants, they should be taken up carefully, with a ball of earth attached, disturbing the roots as little as possible. This is better done when the ground is moist. They will generally need no further care except to keep the

weeds destroyed and the ground in a mellow condition. Those who have the convenience can raise a few plants in the hot-bed for early blooming. In this section of the country seed should not be sown in the open ground before the first of May. As we have given simple directions for cultivation with each kind described, nothing further will be necessary in this place, except to say that some attention should be paid in planting to the height of plants, so that the larger do not hide those of a smaller growth. A little taste is also necessary in the arrangement of colors to produce a good effect; this will be learned by observation and experience. We only intend to throw out a few hints and leave the matter for the present to the good sense and cultivated tastes of our readers.

We give engravings and descriptions of nine of the best and easiest grown annuals, and will give others next month.

THE BALSAM—*Balsamina Hortensis*.—The Balsam, or Lady's Slipper, as it is sometimes called, is well known, occupying a place in almost every garden. It is a native of the East Indies, China, and Japan. It has succulent stems, and beautiful showy flowers. Too much of the seed sold in our seed stores is carelessly saved from improperly grown plants, and the result to the planter is poor single flowers, and sore disappointment. The flowers to be considered good should be large, round, and double. The plant should branch down to the surface of the ground, the flowers completely encircling the stem on all sides. Last season we obtained seed from VILMORIN, of Paris, and we were not only satisfied but delighted with the result. Mons. V. has a variety which he names the *Camellia Balsam*, exceedingly double and fine in every respect. It is from one of these our engraving is taken (fig. 1). Much, however, depends on cultivation.

The Balsam requires a deep, rich, warm soil. Seed may be planted in this latitude about the 1st of May in the open ground; but to secure early flowers, it is better to plant in a hot-bed of moderate heat, or in a cold frame, merely making a box, and covering with glass. Seed in this way may be planted about the 1st of April, and by the 1st of May will be ready to transplant into the open ground.

THE CHINA ASTER—*Aster Chinensis*.—China Asters were first sent from China to Paris in 1730, and have since been carried to all civilized countries. At their first introduction they were single, and of only two colors, red and white. The Germans have taken great pains to improve this flower, and the better sorts are usually called German Aster. The French are particularly fond of Asters, and grow them in the greatest perfection. The flower from which our plate was taken (fig. 1) was grown from French seed, and is called *Pæony Aster*. We were unable to make them ripen their seed, and have since learned that in France the seed can only be ripened under glass.

The culture of the Aster is similar to that of the Balsam. They generally flower better if transplanted than if allowed to remain where the seed was sown.

THE PORTULACCA (fig. 3) is a succulent, spreading plant, that loves the hottest and driest weather. There are four varieties, the scarlet, crimson, yellow, and white. They grow almost as readily as weeds, and may be sown very early in the spring. We know of few more beautiful objects in the floral world than a bed of the Portulacca.



1. BALSAM.

2. PEONY ASTER.

3. PORTULACCA.

TEN WEEK STOCK—*Mathiola annua*.—There are perhaps few species of which there are more varieties, ranging from pure white to the darkest and richest purple. These varieties can be bought at the seed stores; but we have found that seed raised in this country can not be depended on to produce any distinct variety, sufficient care not being taken in growing and preserving the seed. Last year we obtained some thirty varieties from Paris, every one of which came as named.

The plant grows from one to two feet high, with an erect, branching stem, hoary leaves, and long spikes of flowers. The size and richness of these flowers vary greatly in the different varieties, and some of them are very splendid. The species is a native of the south of Europe, by the sea-shore, whence it was introduced in 1831; but the principal varieties have been originated in England and Germany. The German varieties are particularly beautiful.

For very early flowers, a few plants may be raised in a hot-bed, or in a pot in the house, to be transplanted into the open ground as soon as the weather is sufficiently warm. For sowing in the open ground, the soil should be dug deep, and very finely pulverized with the rake. The seed may then be sown in drills, and slightly covered with fine earth. As soon as the plants show their third pair of leaves, if too thick in the bed, they may be carefully transplanted, leaving the plants in the bed about ten inches apart. Transplanting should be done on a damp day, and with care, so as not to disturb the roots, or they will receive a check from which it will take them a long time to recover.

THE CANDY-TUFT—*Iberis*.—The Purple Candy-Tuft, (*I. umbellata*), an engraving of which we give, is an annual plant, growing to the height of about a foot, with spreading branches and large heads of purple flowers. This species is a native of Candia, and receives its name partly from this fact and partly from the form of the flowers. Seeds were taken to England about the year 1590. From that time it has been a general favorite in British gardens, and should be grown by all lovers of flowers,



GERMAN TEN WEEK STOCK.

for its beauty and easy culture. It grows well on almost any rich soil, if not too moist; and as it will not bear transplanting well, it should be sown where it is to remain. Sow from the 1st to the 15th of May. Superior flowers will be obtained by soaking the ground occasionally with liquid manure, readily obtained by placing the cleanings of the fowl-house in a barrel with water, and keeping on hand a constant supply. When the plants are going into flower, the heads should be examined; and if too numerous, they should be removed. By this treatment, and occasionally loosening the ground around the plants, and keeping it free from weeds, flowers have been grown three inches across, most beautifully colored, being of a very dark purple on the outside, and softening to nearly white in the center. The great points are thinning the flowers gradually, as they increase in size, and supplying their roots with abundance of rich food when they are going into flower. By this mode of treatment much finer flowers may be grown than those usually seen in our gardens. The *Lilac Candy-Tuft* is a fine



PURPLE CANDY-TUFT.

variety, of a beautiful lilac color.

The *Rocket Candy-Tuft* (*I. coronaria*) is a splendid species, growing two feet high, branching widely, each plant producing three to five racemes of flowers from six to ten inches long, and the center one even longer than this, if properly cultivated. Cultivation the same as the Purple.

SALPIGLOSSIS.—The *Salpiglossis* is a native of Chili, and was introduced into Europe in 1824. It bears a strong resemblance to the *Petunia*. The genus contains many kinds, differing only in color, and are all funnel-shaped, like the *Petunia*, but not so broad. In our bed, last year, we numbered about a hundred different varieties, many of them distinct and beautiful. They were sown about



SALPIGLOSSIS ATROPURPUREA.

the first of May, and early in July were in full bloom, and attracted crowds of admirers. We have found them to flourish best on a light, dry soil.

The name *Salpiglossis*, which signifies a tongue in a tube, is supposed to allude to the shape of the stigma, which is plainly seen in the center of the tube-shaped corolla.

DRUMMOND'S PHLOX—*Phlox Drummondii*.—The *Phlox Drummondii* is one of the most beautiful annual flowers; and, indeed, we are not certain but we should be justified in calling it the *finest* of all. It is remarkable for the splendor and variety of its colors. Flowers from the same seed will be found of almost every shade of color from the deepest and most brilliant rose-color to the palest and most delicate pink. Every flower, though of the deepest carmine, has the under side of its petals of a pale blush color; and every petal, though of the palest pink, has a dark carmine spot at its base. Thus the variety of colors displayed in a bed of these flowers, almost exceeds description; and when they are seen under a bright sun, and agitated by a gentle breeze, the effect is exceedingly brilliant—we know of nothing more beautiful.

This *Phlox* was discovered in Texas, in 1835, by DRUMMOND, a botanical collector sent out by the Glasgow Botanical Society, who soon after died in Cuba, in the midst of his researches. This being one of the last plants discovered by Mr. DRUMMOND, it was named *Phlox Drummondii*, in honor of its lamented discoverer.

The seed should be sown in a nicely prepared bed about the 1st of May, in this latitude, lightly covered; and in July they will be in full blossom. They are very easily cultivated, requiring no other care than keeping them clear of



PHLOX DRUMMONDI

weeds, and the ground mellow. When any flower of extraordinary beauty is produced, it may be propagated by cuttings, which must be kept in a warm room during the winter, and planted out in the spring.

GOLDEN BARTONIA—*Bartonia aurea*.—The Golden Bartonia was introduced into



GOLDEN BARTONIA.

England, from California, in the year 1835, by the botanist DOUGLAS. Mr. D. introduced many beautiful flowers as the result of his botanical tour in California, and this is one of the most beautiful of them all. This excellent botanist was killed a few years after, by falling into a pit made to entrap wild cattle, in the Sandwich Islands. He introduced into England more ornamental annuals than any other collector.

"It is only beneath the bright sunshine," Dr. LINDLEY observes, "that its splendid flowers unfold. In the early morning the plant is a shabby bush, with pale greenish-grey branches, and weedy leaves; but as the sun exercises his influence, the petals gradually unroll, as if in acknowledgment of his power, till every branch

is radiant with gold: and so metallic is the lustre of the inside of its petals, that one would really think they must be composed of something more solid and enduring than the delicate and perishable tissue of a flower."

The seed should be sown in a sheltered situation, (as the branches are very brittle, and easily broken by the wind,) in a rich, moist soil.

CONVOLVULUS.—The Dwarf Convolvulus (*Convolvulus minor*) is a beautiful flower, with three distinct colors, blue, yellow, and white; the blue being of every shade from purple to a delicate azure blue. We have also the white and striped. The species is a native of Spain, Portugal, Sicily, and the north of Africa, and was introduced into England from Portugal early in the seventeenth century. Some botanists suppose this species to have been originally only found in Barbary; but whether introduced or indigenous, it is now a common weed both in Spain and Portugal. The flowers always fold in gloomy weather and at night. The French call it *Belle-de-jour*.

When the seeds are sown, a shallow drill should be made for them, in which the seeds may be dropped and covered lightly. When the plants come up, they should be thinned so as to stand about an inch apart. They require a dry situation, and rather a rich, light soil. Sow early in the spring, and they will commence flowering in July, and continue until covered with snow.

We received last year several packages of this seed from France, among which were several varieties new to us, one of which was peculiarly dwarfish in its character. Among our large collection of annuals, last year, none attracted more attention among florists than this Dwarf Convolvulus.

The *Convolvulus major*, or Morning Glory, is too well known to need a description, it being one of the most common as well as the most beautiful and easily cultivated of our climbing annuals. It requires the same treatment as the Dwarf Convolvulus, but needs strings or poles on which to climb. It makes an excellent covering for arbors, porches, or unsightly fences.



DWARF CONVOLVULUS.

ORNAMENTAL SHRUBS FOR THE MILLION.

AMONG shrubs employed in the embellishment of ornamental grounds, there are a certain number which recommend themselves under nearly all circumstances; or, as pomologists say of fruits, "worthy of general cultivation." To aid those who desire to make small collections, and who prefer real excellence to rarity or novelty, we sub-join a short list that we can cordially recommend. We may remark, however, that in making such selections, it is desirable to obtain variety as far as it may be possible to combine it with other requisites. We do not mean the greatest possible number of genera, or species, or varieties, but various habits of growth, foliage, flowers, fruit, seasons of blossoming, and such other characteristics as are generally sought and prized in ornamental shrubs. The following list includes nothing but what is perfectly hardy in the climate of Rochester, (latitude 43 deg.,) and of easy cultivation, requiring no nicety in soil, situation, or treatment:

1. THE PINK MEZEREON—*Daphne mezereum*.—A very neat, compact-growing,

small shrub, quite covered early in spring, usually in March, with small flowers, which are very showy, owing to the absence of leaves at the time. There is one with pink or rose-colored flowers, and another white. Propagated from seed.

THE JAPAN QUINCE—*Pyrus Japonica*.—A prickly, spreading bush, covered in early spring (April) with bright scarlet flowers. One of the most attractive of all spring-flowering shrubs. There is a variety called *Blush*, with delicately painted rose and blush flowers, usually scarce. There is also one called "double," which has occasionally a double and in some cases a treble row of petals. Propagated by suckers, and cuttings of the roots.

THE UPRIGHT HONEYSUCKLES—*Lonicera Tartarica*.—Erect shrubs that attain the height of eight or ten feet, with whitish bark. The flowers are produced in April in great profusion, covering the whole plant. They are small, delicate, and pretty, succeeded by small berries about the size of currants. There are a red-flowered and a white-flowered species well known, and several more recently introduced. Propagated by cuttings, which root as freely as willows.

THE DEEP GREEN FORSYTHIA—*F. viridissima*.—One of FORTUNE's best Chinese shrubs, covered early in spring with bright yellow flowers, succeeded by long, pointed foliage of the most intense green. Propagated freely by layers of young wood, or by cuttings.

THE DOUBLE-FLOWERING DWARF ALMOND—*Amygdalus nana flore pleno*.—A very popular and well known shrub, covered in April with small, double, rose-colored flowers, giving the branches the appearance of wreaths of small roses. Propagated by suckers, or layers, or by budding on the plum, peach, or almond. Is very pretty when worked four or five feet high.

THE GORDON'S FLOWERING CURRANT—*Ribes Gordoni*.—A vigorous, rapid-growing currant, with a profusion of brilliant crimson and yellow flowers, a hybrid between the yellow and crimson. The crimson and double crimson varieties are showy, fine shrubs, but in cold latitudes their blossoms are uncertain. Propagated by cuttings.

THE AFRICAN TAMARIX.—A beautiful shrub, with delicate, Juniper-like foliage, and delicate spikes of rosy blossoms, resembling willow catkins in form. The German and French Tamarix are equally beautiful, and blossom in the autumn. Propagated by cuttings.

THE EARLY WHITE, OR LANTANA-LEAVED VIBURNUM—*V. lantanoides*.—A large, robust shrub, with rough, hoary leaves, and large panicles of white flowers, produced on the ends of the branches early in May or in April. It retains its foliage fresh and green very late. Propagated freely by layers. Should be trained in the form of a little tree.

THE SNOW-BALL—*Viburnu opulus*.—A very common but beautiful shrub. If trained into a miniature tree, it has a fine effect when loaded with fine globular clusters of white flowers in May. Propagated by layers.

THE ROSE-COLORED WIEGELA—*W. rosea*.—One of FORTUNE's Chinese shrubs, and one of the best, producing its elegant rose-colored flowers in May. They appear in

clusters on the wood of last year, and resemble in form the fox-glove. Propagated by layers and cuttings of the young wood.

THE BERRBERRY.—There are many species and varieties of these, all beautiful. The purple-leaved is one of the most remarkable. It has yellow blossoms, succeeded by purple fruit. Quite attractive all the season. The *nepalensis* and *illicifolia* are fine, showy, robust species, and the *mycrophylla serratifolia* and *empetrifolia* are curious and pretty small species. Propagated by layers and suckers, and by grafting.

THE SPIRÆA.—This genus embraces a large number of species and varieties. The double plum-leaved, (*prunifolia flore pleno*), with small, double, white flowers in May. The habit is slender, erect, and regular; and when in bloom, every branch is like a perfect and beautiful wreath of white daisies. The tint of the foliage in the autumn, too, is a great point of merit, being a bright orange with a light tint of red. The *lanceolata*, or *Reevesi*, is another beautiful species, with large clusters of snowy white single flowers that cover the whole plant in May. The *Douglassi* has showy spikes of rose-colored flowers towards autumn. All propagated by division of the plants and by layers, or by cuttings of the young wood.

THE ROUGH-LEAVED DEUTZIA.—*Deutzia scabra*.—Covered in June with small spikes of white flowers, produced on the wood of last season. The *gracilis* is a new species, also very beautiful; forces admirably in the house. Propagated by cuttings and layers.

THE LILACS.—The common white and purple are among the most common and widely disseminated shrubs grown, general favorites, and when grown tastefully into miniature trees are very ornamental. The Persian white and purple are very fine. *Charles X* and *Josikea* are distinct and fine newer sorts. Propagated by layers, suckers, and budding and grafting.

THE SYRINGAS.—The common fragrant one (*coronarius*) is well known. The flowers have the fragrance of the orange blossom. The *pubescens* has large foliage and large white flowers without odor. There are also a double-flowering variety and a very dwarf one; both fragrant. Propagated by layers. Blossoms in June.

THE CALYCANTHUS, OR SWEET-SCENTED SHRUB.—A very desirable shrub. The wood is fragrant and the flowers of a rich chocolate color. Blossoms in June, and at intervals afterwards. Propagated by layers and suckers. There are several species and varieties, all fine. The *floridus* is the most common. The *macrocarpa* has large leaves. Rare.

THE PURPLE FRINGE, OR VENETIAN SUMACH, is a popular shrub, remarkable for its curious brown fringed or hair-like flowers, that cover the whole plant in July, giving it the appellation of smoke tree, Jupiter's beard, &c. Propagated by layers.

THE RED-BRANCHED CORNUS.—*C. sanguinea*.—Particularly desirable on account of its blood red hue in autumn and winter. Grows freely from cuttings.

THE EUONYMUS.—These make pretty miniature trees, very attractive in the autumn when the seed capsules open and become a brilliant red. There is also a white-fruited one, desirable for a variety. These are justly ranked among the most showy autumnal ornaments of the shrubbery. Propagated by seeds and layers.

ALTHEAS (*Rose of Sharon*).—There are many varieties of these—purple, violet, painted, variegated, &c. They are neat, compact-growing shrubs, most of them attaining a height of eight or ten feet, and bloom profusely late in autumn, on which account they are particularly desirable. Indeed, the smallest assortment of shrubs should include one or more Altheas. All easily propagated by cuttings of either young, growing shoots, or the ripened young wood.

THE DWARF WHITE HORSE-CHESTNUT.—Blossoms in mid-summer. Has long, elegant spikes of flowers. Particularly desirable at that season. Propagated by seeds and layers.

THE CHIONANTHUS, OR WHITE FRINGE—*C. Virginica*.—A large shrub with broad leaves and a profusion of singular, fringed, white flowers, like cut paper. Propagated from seeds, that lie two years in the ground before vegetating. Layers require two years to root.

THE SILVERY-LEAVED OLEASTER—*Eleagnus argentea*.—A large shrub, with whitish leaves, gray bark, and yellow flowers that appear in July. Called sometimes the "Bohemian olive." Propagated by layers and cuttings.

THE PURPLE-LEAVED MAHONIA—*M. aquifolia*.—One of the finest of all evergreen shrubs for our northern climate. It is low and spreading, with abundant foliage of a purplish color, and covered in early spring (April) with a profusion of gay yellow flowers in large clusters. Propagated by seeds.

THE PYRACANTHA, OR EVERGREEN THORN, is very desirable for its brilliant orange berries in autumn. Propagated by seeds.

To the above may be added, for evergreens, the Tree Box and the hardy Rhododendrons.

AMERICAN ARCHITECTURE.

BY C. VAUX, NEWBURGH.

WHATEVER may be the prospect for American architecture in the good time coming, there can be little doubt of the fact as it at present stands, that it is in many ways far from satisfactory. Over the length and breadth of this country are scattered cities and villages by thousands, and public and private edifices innumerable; and yet we may fairly say, there are the buildings, but where is the architecture?—there is the matter, but where is the manner?—there is the opportunity, but where is the agreeable result? Is it in the churches? A few really creditable specimens may be quickly pointed out, but who will deny that the vast majority are deficient in truthful dignity and artistic beauty? Is it in the public buildings? Several fine works of art at once occur to the mind—a floating doubt perhaps, somewhat questions the Americanism of their expression—but they are nobly conceived and do not shrink from the ordeal of the artist's pencil. It is granted that they are successful. Then comes the question of the vast majority again. Does the memory linger with pleasure over the reminiscences of a provincial tour, and delight to recall the pleasant aspect of each

town with its tasteful hall, school houses, library, theatre, museum, banks, courts of justice, &c., cheerfully erected and gracefully arranged by its free and enlightened inhabitants—for their own use and pleasure of course—but with a wise regard for mutual advantage and individual enjoyment, that ensures the sympathy of every passing stranger, the more readily too, as each discovers that he, even he, has been thought of, and that some study has been expended to give him pleasure! No; this is not a result to be looked for at present. Does the secret of beauty lie in the private buildings, the stores, the ware-houses, the mansions, the villas, the hotels, the streets, or the cottages? There are probably as magnificent hotels and stores in the large cities of America as any where in the world. Architecture, within the last ten years, has managed to get a genuine foothold in this department of building; it has begun to pay, and that is truly an excellent sign, and one that offers food for reflection and solid encouragement: yet it is the few and not the many even here that speak of refinement and a love of grace, which is as averse to meretricious display as it is to ungainly awkwardness. Among the private residences a great number are excellent, but still the mass are unsatisfactory in form, proportion, color, and light and shade. What is the reason of all this? Why is there comparatively so little beauty in American buildings? Some will say America is a dollar-loving country, without taste for the arts. Others, that expense is the obstacle, and that the republican simplicity of America cannot afford the luxury of good architecture.

The latter of these solutions is clearly incorrect, for it is knowledge and not money that is the important source of any pleasurable emotion that may be caused by a building; indeed, a simple, well planned structure, costs less to execute for the accommodation obtained, than an ill planned one, and the fact of its being agreeable and effective or otherwise, does not depend on any ornament that may be superadded to the useful and necessary forms of which it is composed, but on the arrangement of those forms themselves, so that they may balance each other and suggest the pleasant idea of harmonious proportion, fitness, and agreeable variety to the eye, and through the eye to the mind. All this is simply a matter of study before building, not of additional cost in building.

The other solution of the problem, that Americans do not appreciate the beautiful, and do not care for it, or value it, is a more specious, but equally erroneous one. There are doubtless many obstructions that have hindered and do hinder the development of correct taste in the United States; but it is not that the spring is dry, but that these obstacles prevent its water from flowing freely: and yet there appears no real difficulty that earnestness and ordinary patience may not overcome. One important evidence of a genuine longing for the beautiful may be at once pointed out. Almost every American has an equally unaffected though not of course an equally appreciative love for the country. This love appears intuitive, and the possibility of ease and a country place or suburban cottage, large or small, is a vision that gives a zest to the labors of industrious thousands. This one simple fact is of marked importance; it shows that there is an innate homage to the natural, in contradistinction to the artificial—a preference for the works of God to the works of man—and no

matter what passing influences may prevent the perfect working of this tendency, there it exists, and with all its short-comings, is a valuable proof of inherent good, true, and healthy taste; moreover the greater includes the less—an actual love for nature, however crude it may be, speaks clearly of a possible love for art.

A reference to the early history of the country seems to show that the dominant spirit of Puritanism was ever in opposition to any advance in the fine arts, which were considered poms and vanities, closely connected with superstition, popery, aristocracy, &c., and eschewed accordingly. The result is not altogether undesirable, though it has appeared to retard the advance of refinement and civilization. The awakening spirit of republicanism refused to acknowledge the value of art as it then existed—a tender hot-house plant, ministering to the delights of a select few—the democratic element rebelled against this idea *in toto*, and tacitly but none the less practically demanded of art to thrive in the open air in all weathers, for the benefit of all if it was worth anything, and if not, to perish as a troublesome and useless incumbrance. This was a severe course to take, and the effects are everywhere felt; but after all it had truth on its side, and candor must allow that no local, partial class, recognizing advance in art, however individually valuable its examples might have been, could in reality have compensated for the disadvantages that would have attended it. Now every step in advance, slow though it be, is a real step taken by the whole country. When we look at the ruins of old Rome, we say, what a great people! what temples! what mighty works! And undoubtedly Rome was truly great *in individuals*—very great in a strong and clever minority, who spent with marked ability the money and labor of the weak and ignorant majority; but the *plebes*—the unlettered, unthought-of common people, the million—were not great, nor were they taught to be so, and therefore Rome fell.

During the last hundred years there has been a continuous effort to give to the American million the rudiments of self-reliant greatness, to abolish class legislation, and to sink the importance of individuals. "*Aut America aut nullus*,"—America or no *one*,—has been, is, and will probably ever be the practical motto. It is not surprising, then, that the advancement in the arts has been somewhat less rapid than the progress in commercial prosperity and political importance. The conditions were new, and it must be confessed rather hard. Continuous ease and leisure readily welcome art, while constant action and industry require time to become acquainted with its merits. To the former it *may* be a parasite and yet be supported, to the latter it *must* be a friend or nothing. The great bulk of the money that is laid out on building in the United States comes from the million, and is spent for and by the million. The result is therefore the taste of the million. The question then occurs, how is this universal taste to be improved? There is the sound, healthy material, unprejudiced, open to conviction, with a real, though not thoroughly understood desire for what is good and true; there is plenty of prosperity and opportunity; plenty of money and industry; plenty of everything but education and the diffusion of knowledge. This language may seem inapplicable to America to whom humanity is indebted for the successful introduction of the common school system, which lies at

the root of every healthy idea of reform now at work in the world, but is nevertheless true. The genius of American art may with justice say of the genius of American education —

"If she be not fair to me,
What care I how fair she be.

Education must be liberal and comprehensive as well as universal and cheap, or the result will remain incomplete. In the matter of architecture, to secure anything permanently satisfactory there are necessary professors of ability, workmen of ability, and an appreciative able public. It would seem that architects in America are not at present, in the majority of cases, born and bred Americans; they have consequently serious difficulties to contend against. They have to learn much and to unlearn much more, ere the spirit instilled into their designs can be truly and genuinely American. There is no good reason now why this state of affairs should continue. Architecture is a profession likely to be in considerable demand in the United States for several hundred years at least, and the demand is steadily increasing. Why then should not parents speculate for their sons in this line? Why should not the article, as it is for home consumption, be raised at home? It is an honorable calling, not certainly offering such splendid fortunes as the merchant *may* realize, but it is a fair opening, and the only capital that it requires beyond brains and industry, is the expense for books and an education. When a fair share of young America enters upon this study heart and soul, as a means of earning an independent position, we may expect a rapid natural development of the architectural resources of the country, and the present meagre facilities for artistic education must be gradually increased, and the schools and colleges will probably after a time be induced to include in their course of study, subjects calculated to discover and foster in the rising generation such natural gifts as have a bearing on these matters.

To ensure workmen of ability, a reasonable chance to improve is alone wanted. So long as the general demand is for monotonous, common-place, stereotyped work, the average of ability will necessarily be low; but with opportunity — good, cheap, illustrated standard works, and a spirited weekly paper devoted to the special discussion of the subjects interesting to architects, engineers, carpenters, masons, and all the other trades connected with building, a paper that should diffuse sound theoretical and practical information on the art in general and in detail throughout the whole country — the advance would be rapidly felt; for wherever there is an American, there at least, be he rich or poor, is a reader, a thinker, and an actor. Self-supporting schools of design for painters, decorators, modellers, carvers, paper-stainers, &c., must follow in due course; for the positiveness of the need would soon become evident, and the object would then be almost gained.

With reference to the appreciative and able public, the press is the improving power that is to be looked to. Cheap popular works on architecture, in all its bearings, popular essays, popular articles, popular engravings, and hundreds of them, and yet all good — these are the simple, truthful and effective means that are to influence the public, by supplying a medium through which it may see clearly and thus be led to

criticise freely, prefer wisely, and act judiciously. These are the tools with which the lamented pioneer of genuine American architecture labored with such zeal and ability, and achieved so much. These are the materials that others following his example are now endeavoring to make use of, and the signs of the times in this present year, 1853, far from being in any way disheartening, are decidedly propitious. Proofs of an advancing interest in this subject and of an increasing desire to respond to it are springing up in newspapers, magazines, books, lectures, &c., and the public is certainly not slow to buy and read.

The truth is, not that America is a dollar-worshipping country, without any love for the arts, but a dollar-making country, with restricted opportunities for æsthetic education *as yet*; but when this want is freely ministered to in the spirit that it may be, and it is justly to be hoped will be ere long, there is reason to conjecture that correct architectural taste will be as universal in the United States as is at this present time a correct popular idea of the nature of a republican form of government. We may then hope for genuine originality as well as intrinsic beauty in American buildings. This subject of originality, however, is perhaps worthy of separate future consideration.

SPRING AT THE SOUTH AND AT THE NORTH.

BY A. D. G., CLINTON, N. Y.

IN undertaking to describe some of the peculiarities of a southern spring, I do not aim at special accuracy, or fulness of detail; but attempt, simply, to speak of what is noticeable by a stranger from the north. My information was gathered during the winters and springs of two successive years, in the several States on the sea-board, but chiefly in Florida.

For the benefit of some of your readers, allow me to state, first, that there is a winter at the south, as well as at the north. Frosts cut off the the leaves of deciduous trees and shrubs in November; so that, aside from the greater number and variety of evergreens which abound there, the winter landscape is almost as dreary as at the north. Several kinds of oak, the persimmon, cypress, gum-tree, catalpa, pride of India, and other deciduous trees, are without leaves for nearly three months. But between the vast forests of pine, the live and water oak, the laurel, bay-tree, magnolia, and other evergreen trees and shrubs, one can easily imagine, (on a fair day,) that he is in the midst of summer. Snow and ice are seldom seen in Florida. Hardy vegetables, such as peas, cabbage, lettuce, and turnips, are often grown during the entire winter. The whole family of roses, geraniums, verbenas, the aloe, and other tender plants, require no protection. The temperature of the air during the three winter months ranges, at mid-day, from about 45° to 80°; the average is probably not far from 65°. A little fire upon the hearth is often needed for comfort, and an overcoat is not amiss when the "northerns" blow. But there are frequent intervals of delightful balmy weather, when the sun shines warm through a soft, hazy atmosphere, and the

wind, blowing fresh from the tropics, fans your cheek with its fragrant breath, and gives elasticity to your frame. On such days the invalid comes out from his chamber and sits upon the broad piazza, which adorns every southern house, and while inhaling the genial air, breathes freer, and indulges again the hope of recovery. But such weather continues only a few days at a time. The air is, for the most part, so cold that nearly all vegetation remains dormant. A few birds are seen throughout the winter, such as pelican, gull, fish-hawk, &c., on the rivers and sea-shore; and the blue jay, wren, blue-bird, turkey buzzard and crow, inland. The last named seems to have a bronchial affection,—his *caw* being quite feeble and husky.

The first indication of coming spring is seen not in any change of the weather, but in the planting of Irish potatoes! Gardens are seldom plowed for this purpose, but merely dug over with a heavy hoe. Trenches, eight or ten inches deep, are then made, a little manure is spread in the bottom, the potato dropped in, and the whole covered with several inches of soil.

Early in February, the air gradually becomes milder. Fires are often suffered to go down in the middle of the day, and one feels an irresistible desire to stroll in the fields in search of some fresh green leaf or spring flower. Nor will he search in vain, for the mulberry is now expanding its leaves, and the peach is opening here and there a blossom. A few days later, you will find the wild blue violet, and pink, white, and yellow flowers as modest as the violet. If you walk in the neighborhood of streams or marshy places, you will notice next the scarlet blossoms of the soft maple. Soon you will find the wild plum, canopied with snowy flowers, musical with bees, and filling the air with a pleasant odor; and then the red-bud tree with its singular blossoms. But perhaps more pleasing than anything yet beheld, will be the first flower of the yellow jasmine, a vine which you have noticed during the winter, clambering over fences and bushes by the road-side and far up among the branches of trees, now opening its numerous trumpet-shaped blossoms, and loading the air with delicious fragrance. Soon the orange and fig trees push out fresh leaves, and flowers appear on the blackberry, the wild rose and shrub honeysuckle. Meanwhile, the birds are singing merrily. Chief among them is the mocking-bird, whom you hear early in the morning and late at night; unless we except the bob-o'-link, no bird seems so gleeful as this. Swaying upon the highest branch of a tree, he pours forth a continuous song, and that in every dialect, as though he would tell all the feathered creation what a delightful world he lives in; or, flying about and balancing himself in the air, he sings and chatters all the while, as though he had more joy than he could well contain.

In the latter part of February, and early in March, trees of all kinds put forth fresh leaves. The pine sends out the yellow tufts on the ends of its branches. The leaves of the live and water oak rustle to the ground, being pushed off by the opening of new leaf buds. The dull, greyish green of the olive becomes brighter, the cabbage palmetto and date tree send up central leaf stalks, and the towering magnolia (*grandiflora*) takes on new adornments of thick, glossy leaves, and large white flowers. Soon the scarlet blossoms of the pomegranate appear, and the little brown flowers of the

long trailing moss; the "hawthorn's top" is a mass of snowy white, and the red jasmine, clambering over many a bush and tree, gives them the appearance of having been dipped in blood. In the course of this month, (March,) oleanders, roses, verbenas, geraniums, and a great variety of garden flowers, are in the perfection of their beauty. The roses! the roses! To see the *Lamarque*, *Cloth of Gold*, *Ophir*, *Banksias*, and other tea scented varieties climbing over pillars and even above second story windows, completely loaded with flowers, is a sight which one must himself behold, in order to appreciate its splendor. Lettuce, beets, Irish potatoes, peas and strawberries now appear on the table. Beans, melons, corn, and all kinds of vegetables are growing rapidly. And, to tell the whole story, rattlesnakes, lizards, and other reptiles now come out of their winter quarters. Alligators are seen sporting in the rivers and creeks, carrying their black noses above water, or basking in the sun upon the marshy shore.

In April, spring is thoroughly established. The first crop of figs attains its full size. Grass makes a fine growth in low, moist situations, but elsewhere,—if perchance the deep, dry sand allows it to grow at all, it soon withers away. High winds, frequent showers, and sudden changes, characterize this month at the south as well as the north, though, of course, the range of temperature is much higher. The sun at mid-day becomes so warm that the traveler from the north begins to long for cooler weather.

From this rapid survey, it appears that there is much to interest a stranger in spring at the south. It is no indifferent thing to look for the first time upon the cypress waving high its plumes of delicate, larch-like foliage, or the stately magnolia, or the live oak, resembling, often, the largest elms of New England, and the branches of all these trees draped with the long, grey moss of these latitudes, from two to fifteen feet in length, and swaying in the wind; or the sago, palmetto, and date trees, indicating the neighborhood of the tropics. Nor does it lessen the interest with which one beholds these scenes to reflect that while he is surrounded by such beautiful verdure, by flowers, and birds, and summer air, his friends at the north are still shivering in the midst of snow and ice and dreary storms.

Turning now from spring at the south, to speak of the same season at the north, I need not apprise the reader that here a winter precedes the spring. He whose lot has been cast where snow storms prevail during five months of the year, where the mercury falls to 20° below zero, and where, as some one remarked near the close of a long winter, "thermometers give out, and have to be laid up for repairs," such an one, certainly, need not be told that we have a winter at the north.

But there is, at length, an end to winter even here. The first, though quite remote indication of returning spring is seen in the increasing length of the day. This is perceptible in February, and still more so in March. The sun takes daily a wider circuit through the heavens; and though winter still reigns, and rages too, there is a peculiar glow in the sky, especially at morning and evening, which tells of a more genial season approaching. Often, indeed, during the month of March, when the cold winds are at rest, the sun rapidly melts the snow from the south side of the roofs of

houses, and the grass by the door step, in the same sheltered aspect, springs up fresh and green. Hens cackle more loudly, and chanticleer and the turkey cock brush up their plumes, and display them more proudly in the sun. If the fair weather continues several days in succession, the snow will disappear in patches from the fields, and cattle and sheep will roam about in the pastures to smell the fresh ground, and to search for the first blade of grass. At such times, many persons, touched with the spring feeling, go about repeating Bryant's song to March—

"For thou to northern lands again
The glad and glorious sun doth bring,
And thou hast joined the gentle train,
And wear'st the gentle name of Spring.

And in thy reign of blast and storm,
Smiles many a long, bright, sunny day,
When the changed winds are soft and warm,
And heaven puts on the blue of May."

But often, before the song is finished, clouds darken the sun, wind, hail and snow beat upon the earth with redoubled fury. In the latter part of this month, however, milder days return. The snow gradually gives way before sun, wind and rain, and melts into the earth, or runs off into the swollen streams.

On some bright morning, the notes of "the first robin" are heard. His arrival produces a general gladness in every household. It is the return of an old friend, reminding us of pleasant days in the past, and bidding us hope for happy days to come. The Phoebe bird and blue bird follow in the train of the robin.* Their arrival is the signal with many gardeners for preparing hot-beds to forward early vegetables. About these days, wild pigeons are often seen, wheeling in large flocks through the air, sometimes taking a high flight, and at others passing so low as to come within reach of the sportsman's gun. Cold winds, hail-storms and flurries of snow are quite frequent still. And yet, in the midst of this unfavorable weather, some of the earliest garden flowers are peeping above ground. There is the *Daphne mezereon*, in flower often while surrounded by snow; the crocus, said in poetry to be

"the first gilt thing
That wears the trembling breath of spring;"

and the daffodil, to be followed ere long by the hyacinth, snow-drop, tulip and other plants, which come up successively, and make a cheerful spot in the otherwise desolate garden.

* A traveller in South America, speaking of the birds of his native land, says it is pleasant to notice that, into whatever strange countries they may have wandered during winter, and whatever strange tongues they may have heard, they nevertheless come back *speaking English*. Hark! "Phoebe! Phoebe!" plain enough. And by and by the Bob o' link, saying "Bob o' Lincoln," and the quail saying "Bob White." We have heard of one who always thought the robin said, "skillet! skillet! three legs to a skillet! two legs to a skillet!" A certain facetious doctor says the robins cry out to him as he passes along the road, "kill 'em! cure 'em! cure 'em! physic! physic! physic!" And the frogs indulge in humorous, sarcastic ditties, in which one hears, "jug o' rum! jug o' rum! jug o' rum!" While another responds, "Paddy got throonk, got throonk, 'oonk, 'nk!" (*See Outliector, Nov. 1847.*)

The last of this month and the early part of April, according as the season "opens," farmers are occupied in making maple sugar. As the snow disappears and warm rains fall, the wheat fields revive, and take on a lively green. Fences are now repaired, and fields favorably situated are plowed. Frogs are heard, occasionally, at night-fall. By the middle of April, a few seeds are often sown, such as peas, beets and onions; and early potatoes are planted. Grass begins to look green by the road-side, and along water-courses, and in orchards. On the north and west sides of fences, and of hills with a northern aspect, snow banks still lie, little affected by the sun or frequent rains. During the last half of this month, whoever rambles in the woods, will find the lion leaf and trailing arbutus in blossom, and will notice that the elms and maples are beginning to bloom. The low willows by the side of streams, and the alders are showing signs of life. Upon a sunny day, butterflies occasionally appear, and soon the little white breasted swallow* is seen sailing about in the air, the pioneer of the martin and barn swallow. At intervals during this month, frequent and heavy rains fall, drenching the ground with water, and soaking out the last particle of frost. Often, too, at the close of a dreary day, the storm abates, a thousand birds break forth in song, and the sun, shining through the parted clouds, floods the earth with light, and spans the eastern heavens with a rainbow. In the latter part of this month, young leaves push out on honeysuckles, lilacs, gooseberry and currant bushes.

By the first week in May, if the season is favorable, some early planted seeds appear above ground. Gardeners are busy in dressing their walks and shrubbery, and preparing to take hold of their spring work in earnest, as soon as the ground is fit for the spade. The golden willow and the tamarack are now sending out leaves. Chimney swallows arrive about the middle of this month. The huge buds of the rhubarb plant now thrust themselves up to the light, and asparagus is nearly ready for cutting. Early lettuce and radishes appear on the table. Violets abound in the meadows, and the strawberry blossoms give token of delicious fruit not many weeks distant. The sugar maple and soft maple are now decked with green and scarlet pendulous flowers. Soon the forests begin to revive. At first, a few trees on the outskirts display a soft, warm tint, which changes from day to day, until at length the entire forest is clothed in the verdure of summer. The last half of this month is marked by a rapid growth of all vegetation. In the course of a single day, and often during one warm rain, surprising changes appear. Buds expand into leaves and flowers, and fields of grain and grass are robed, as if by magic, in the deepest green. The beech, oak, chestnut and locust, the last to come out, now respond to the call of spring. Soon, bob-o'-links are here, pouring forth their liquid, gurgling melody. Apple trees now open their beautiful and fragrant blossoms. About the 20th of this month corn fields are planted. Evergreens now shoot out fresh tufts, which emit a pleasant odor. The forests are in full leaf. Yellow butterflies flit about, flowers spring up on every side, and the hum of bees and insects fills the air with a quiet music. This is, indeed, the most delightful

* Of this bird, Sir HUMPHREY DAVY says: "He is one of my favorites, and a rival to the nightingale; for he gladdens my sense of seeing, as the other does my sense of hearing. He is the joyous prophet of the year, the harbinger of the best season." Might he not have said this with greater propriety of the robin?

season of the year. "The trees of the field clap their hands, and the vallies shout for joy." Within a few days a wonderful transformation has taken place. Everything that grows has come forth with a sudden gush of life and beauty, and carries back our thoughts to the time when the earth sprang from the Creator's hand, and received his gracious benediction. Who can look abroad upon the world at such a time as this, and not say from his inmost soul, "O Lord, how manifold are thy works! in wisdom hast thou made them all."

From this account of spring at the north, it appears that though it does not present as glowing a picture as the same season at the south, it nevertheless is not without its pleasing aspects. Its progress is indeed slow and irregular. After the genial season is thought to have fairly arrived, many a frost, and chilly wind, and storm intervenes. Much of the poetry of spring is too poetical for the latitude of our northern States. Many of the figures of speech which we apply to spring, were borrowed, originally, from the poetry of southern Europe, where this season is as mild, and musical, and balmy as the poets sing. But it will hardly do to use the same language in these cold regions. Some one has well said, that whoever goes out in early May to muse and sing of the season, must, ordinarily, first put on overcoat and mittens!

But even this slow advance of spring is not without its uses, both to the animal and vegetable creation. It prepares them to pass with safety from the rigors of winter to the intense heat of summer. There is also something exceedingly beautiful in the coming on of spring at the north. The change from the gloom and desolation of winter to the life and loveliness of spring, is wonderful, and would surprise us more, had we not been so long accustomed to behold it. And then, the rapid transitions which occur during the progress of spring,—snow flurries followed by bright, balmy sunshine; rain-storms, intermingled with flashes of golden light, and ending with rainbows; flowers and leaves springing from the bosom of decay and death; birds singing, where lately the storms of winter howled,—surely, these things are beautiful to see.

He who has been surrounded by the severities of a long, northern winter, enjoys the opening of spring with a zest which southerners cannot feel. The first crocus, or lilac blossom, is regarded with fonder interest than all the glories of southern climes can possibly excite in the inhabitants of those regions.

But without instituting farther comparisons, it is enough to say that spring wherever beheld, is a season of wonder and delight. It is suggestive of life, and inspires hope. It is adapted to remind us of the final resurrection, and to teach us lessons of trust in God. Cold must be his heart, who can stand up and look upon the earth at such a time as this, and not exclaim with devout emotion:

"These are thy glorious works, Parent of Good.
Almighty! thine this universal frame,
Thus wondrous fair! Thyself how wondrous then!"



THE QUALIFICATIONS OF A GOOD GARDENER.

BY WM. CHORLTON, NEW BRIGHTON, N. Y.

In the columns of your widely spread journal there has appeared from time to time various articles respecting the qualities of gardeners, and as I believe that you have their true interest at heart, you will perhaps consider the few following remarks admissible.

To combine in one man the capability of performing and carrying through the various and multitudinous detail of operations required in any establishment where the different departments of fruit, flower, and vegetable forcing, and general artificial growing of plants, besides the regular routine of the fruit, vegetable, flower gardens, and pleasure grounds, to say nothing of other minor affairs which he has to take charge of, requires something more than being an ordinary mechanic. Such a man as this is possessed of a good education. In most cases that education has been mainly obtained by his own exertion and adapted to his intended field of labor, consequently the more valuable, not only to himself, but to his employer also. He must necessarily be a man of observation, energy and foresight, and as this class of persons have more or less of enthusiasm in their character, it is difficult to conceive how (if honest, and I believe he possesses his share of this good quality,) he can be otherwise than a good and valuable servant, in any situation where his services may be required. In advocating the cause of gardeners, it is only for the above class of men that I wish for indulgence. Such a class ought to have, and in some cases do receive, their due encouragement; but too often they are classed along with the clodhopper and wheelbarrow trundler, too many of whom are spread over the country, confirming the old adage, "Impudence and ignorance go together," and go strutting about with an air of effrontery that is disgusting to common sense, deceiving for a time till all is ruined, when they are turned out, and "go and do likewise" elsewhere.

Horticulture is now approaching the perfection in this country which it has attained in Europe, and is likely in time to out-rival her in good culture, if not in artificial grandeur; but the progress to be made depends in part upon the quality of those practically engaged in it. We want more good men and less bad ones, and we want the good quality to be recognised as something more than the "hewer of wood and drawer of water;" never fear that a good gardener will not work. I believe that I speak the sentiment of all the best men, by saying, respectable industry is our motto. It is rather degrading to think, that after many years spent in close study, observation, and the acquiring of that knowledge most suitable to the interests of employers, and the better performance of the duties required, to be placed on a level with the pretender and empiric. I sincerely hope that those who possess gardening establishments will begin to acquire a more practical knowledge of such things, so as to be able the more readily to detect the ignorance that is too often practiced upon them. A good gardener will never fear his employer being acquainted with the detail of his work; for if his operations are correct, they will the more readily be seen and appreciated.

Our late friend DOWNING,—whose untimely death we all lament,—understood the position well. He knew how to analyze the great compound, Horticulture, and knowing how he was enabled to judge of the various qualifications of its professors. *In him the true gardener had a friend. We mourn his loss.*

We are frequently taunted with such expressions as, why do you not produce such specimens of your skill as are to be found at the Chiswick shows, and others of like quality of which you are wont to boast! As Shakespeare says, "Aye, there's the rub." Why, in some few instances, where the hands of the gardener can manage to go through any particular subject, it is done; for example, in some of our fruit houses, and occasionally, if not over burdened with other work, in plant growing, (though in this case but seldom.) It must be remembered that the whole of such productions requires more skilled labor than it is possible for one pair of hands to do, and as we have not the same quality of laborers as assistants, as are there found in abundance, the same perfection cannot be attained. There a head gardener is frequently importuned to accept with a premium, intelligent, enthusiastic, smart youths, who are yearning to learn the profession. Here we can seldom obtain anything better than a man of mature age, whose intellect has never been exercised, who, in too many cases, scarcely knows the right end of the tool that is put into his hand, and he forsooth, after getting sufficient knowledge to handle it somehow, leaves you to set up as a master gardener. Under existing circumstances, the quality of assistant labor is not the fault of our employers, many of whom are aware of the fact, and give allowance accordingly. So long as the present system of obtaining gardening labor is in existence, we may not look forward with a progressive eye. We want more home made gardeners, so as to infuse a portion of the native intelligence into the business. Let horticulture be advocated and acknowledged as a science more strenuously in the newspapers, in the different periodicals, and throughout society, so as to make it appear worth while for the intelligent youths of the country to take it up, let it be spoken of on the hearthstone as something worthy of their acceptance, educate them so that they may apply their minds for a time to close study and observation of nature, and withal, entice the cottagers to cultivate their little plots, by encouraging them at the horticultural societies, so that the family growing up may acquire a taste for these things, *for it is from such homes that native gardeners must come.* Let us have the same quality as assistants, and I presume that it will be seen that there are some men of Chiswick quality in the country, who can show the same culture. Add to this a better knowledge of gardening affairs on the part of employers, so that they may know how to appreciate the value of a good gardener, and he will be stimulated to fresh exertions. Likewise, establish public horticultural and experimental gardens, that we may have something to look up to. Give the subject a national character—let it be seen that the nation is interested in the matter, and we will subscribe our quota, in the performance of duty, by rendering assistance in making horticulture worthy of this great and free country. Let us have opportunity and encouragement instead of ridicule, and we will do our best to equal the most perfect culture in the world—to establish a true position and standing for the educated gardener, and

drive the strutting know-nothing into the back ground, behind the tall hollyhocks in the shrubbery, to keep him from further mischief.

As the following is somewhat *appropos* to the present subject, I quote it from the *English Gardener's Chronicle*, of September 18th, 1852: "From information statistically and otherwise carefully collected, it is found, that as a body, gardeners are masters of more knowledge generally, and have received a better education than most other professional classes of persons. The greater responsibility therefore attaches to them in practically diffusing and turning the blessing to good account." How different is this compared with the recognised standard of the same class of men in America. There are, however, some in this country, who are as good gardeners as ever handled a knife in Britain, who have grown, and can grow again as fine specimens, and are qualified to produce as good culture generally.* Let us have the same quality of assistance, and the same opportunities, and there will soon be seen some Chiswick grown specimens on the tables of our horticultural societies.

ASIATIC CONIFERS.

BY JOHN SAUL, WASHINGTON, D. C.

In the temperate latitudes of America and Europe, where the winters are long and severe, evergreen trees are objects of particular interest. At this we need not be surprised, neither is the cause difficult to be divined. When wrapped in the midst of winter—having perhaps weeks of cold or snowy weather, the snow covering everything as far as the eye can reach, with nothing to relieve it, the trees denuded of their foliage, and all vegetation not asleep only, but apparently annihilated—if we peep through our windows we behold nothing save a perpetual, monotonous sheet of snow, the eye soon becomes wearied, and we instinctively turn away to seek a little repose. But how changed would all this appear had the eye alighted on a few graceful Norway spruce, their branches loaded with singularly beautiful cones; or some majestic hemlock spruce, &c. Evergreens such as these would lend a charm to the scene. Ladies and invalids, however confined by weather, may gaze with the most intense delight on objects such as these—the most beautiful and graceful of nature's works. If we walk abroad in this wintry season, what a contrast is afforded from the bleak, desolate dreariness of deciduous trees to the rich and beautiful foliage of masses of evergreens now in full dress, "decked in all their beauty."

Persons acquainted with the well kept gardens of England, know well what a beautiful effect evergreens have in the midst of winter, say the dreary month of January. If the weather is mild at this season—and it is not often severe—the many

* That we have many intelligent and excellent practical gardeners in this country, no one can doubt, (Mr. CHOHLRON himself is a good example,) but somehow as yet the pursuit has not attracted many native born Americans, not even the sons of gardeners. It is not yet sufficiently elevated and well paid as a general thing. The great majority of those who come here from abroad and palm themselves off as gardeners, were nothing more than mere garden laborers in their own country, and convey an unfavorable impression of the craft, sure enough. However, they are good enough for places where the gardener is required to do all sorts of work, or in other words, to "make himself generally useful."—ED.

varieties of *Laurustinus* will be a sheet of bloom; many of the early varieties of *Rhododendrons* will be in flower, such as *R. pulcherrima*, *daurica*, &c.—the former I have seen fully in bloom, in the open border, the first week in January. Some of the species and varieties of *Arbutus* will be now in bloom—*A. procera* and *hybrida* about their height, the varieties of *A. unedo* passing off. Hollies in their various varieties are loaded with berries of the most brilliant crimson scarlet; their rich and varied foliage give a marked and distinct feature to a collection of evergreens. Many have large foliage of the deepest green color, others large foliage margined with the richest gold, and every imaginable intermediate shade. At this time such evergreens as English laurel, Portugal laurel, yews of sorts, arbutus, evergreen oaks, with the whole collection of conifers, are perfection as regards their foliage. At this season, also, many deciduous shrubs are in bloom, such as *Chimonanthus fragrans*, *C. grandiflorus*, *C. luteus*, *Jasminum nudiflorum*, *Daphne mezereum*, *Erica carnea* and others, *Cydonia Japonica* and varieties, with many other interesting and beautiful shrubs. Among herbaceous and bulbous-rooted plants, many lovely genera are now in flower. With abundance of such materials at command, we need not be surprized if the man of taste should so arrange and dispose of them as to make the flower garden present in the midst of winter an interest and beauty peculiar to itself at this dull season. So well is this understood, that the appearance of the winter garden is as great a consideration, and in many places greater, than its summer appearance.

The climate of Great Britain is particularly favorable to this system of gardening. Lying with its isles off the west coast of Europe, it has the heat of summer as well as the winter's cold very much modified by the vast waters of the Atlantic. If we glance at all the broad-leaved evergreens as they are to be seen in that country, we should say they are luxuriating in a climate that is to them perfection—very intense cold they are incapable of withstanding, and intense heat with a brilliant burning sun is not over agreeable to many of them, the latter probably caused by the immense draw on their broad foliage in heated, arid weather. Among the other offices which leaves perform is that of respiration, and if the plants are constituted for an atmosphere more cool and humid than our own, it follows that the immense draw on the foliage must injure if not destroy the plants. The size of the foliage is no criterion by which to judge the degrees of heat or cold which a plant will bear. Our native *Magnolia grandiflora*, coming from a southern clime, will stand any amount of heat and brilliant sun which would be destructive to plants of more temperate, humid climes, or whose natural habitat is the shade of forests.

The continent of Europe is not so favorable to the growth of such evergreens as Great Britain. Like our own country, the cold of winter in the northern parts, and the heat of summer in the more southern, appear to operate alike injuriously. This latter remark will hold good of only some of the genera, as many grow with as great vigor and luxuriance, and even greater in the southern countries of Europe, than in England. Among these may be numbered *Arbutus unedo*, *Lauris nobilis*, *Viburnum tinus*, &c., &c.

In this country it will perhaps be said this description of gardening cannot be

carried to as high a state as in England, more particularly in the Middle and Northern States, from the length and severity of our winters; yet by collecting together the materials now at hand, or which may be easily procured, much more may be accomplished than is generally imagined in this way. If we pause for a moment, and consider which are the countries we can with most certainty draw our supply from, I think without much hesitation we shall decide on many parts of Asia as likely to give us many plants and trees suitable to our purpose. The extensive empire of China furnishes many. The climate of that country approximates more closely to our own than any other—the middle and northern parts to our Middle and Northern States. The rivers about Pekin are as hard frozen in winter as our Hudson, and the summers as bright and warm. The southern parts may in some degree be compared to our Southern States. Now why should not plants from that country be perfectly at home in this? And we find they are. The *Forsythia viridissima*, *Spirea prunifolia flore pleno*, *Weigela rosea*, *Magnolia conspicua*, with many other deciduous trees and shrubs, do infinitely better here than in England—they grow more luxuriantly and thrifty, and bloom more profusely and fine. Beautiful as the English holly is, and desirable as it may be to cultivate extensively in this, our climate is such that its cultivation can never become general. Intense cold it does not like, and a brilliant burning sun is destructive to its foliage, which nature designed for a more humid, temperate climate. In the northern provinces of China are found some beautiful hollies—*Ilex cornuta*, *microcarpa*, &c. Here are plants from the same regions as the *Forsythia*, *Weigela*, &c., plants that bear as great a degree of cold, and as burning a sun in their native country, as our Middle States can give them. Why, then, should they not, like the plants I have already named, feel as much at home in this country as there. China also gives us beautiful oaks—*Quercus inversa*, *sclerophylla*, &c.; also, the beautiful *Berberis Japonica*, with many other charming evergreens, all of which are deserving of a trial here, as many if not all will adapt themselves to our climate. The camellia, coming to us from more southern provinces of that empire, is not hardy. Let me, however, assure the reader it will stand many degrees more frost than many cultivators suppose. In England it is more hardy than the English laurel. I know in that country many magnificent specimens that have braved many winters—winters that have shook and injured the English laurel, and destroyed the laurustinus, yet failed to injure or destroy a branch or leaf of the camellia. They are in England perfectly hardy. *Olea fragrans*, *Ligustrum lucidum*, *Euonymus Japonica*, *Photinia serrulata*, &c., are Chinese evergreens which may be considered hardy in the latitude whence I write. Indeed, about New York many of them are nearly or quite so. Should not this make us think well of their kindred which are coming after.

Beautiful and lovely as these broad-leaved evergreens are, the conifers of these countries are more invaluable to the gardens and scenery of this, as they find themselves here perfectly at home. I said, “the size of foliage is no criterion by which to judge the degrees of heat or cold which a plant will bear,” yet it is a well known fact that all or nearly all the evergreen trees of cold regions are small-leaved, and included

for the most part among conifers. If cold latitudes produce broad-leaved evergreens, they are for the most part decumbent shrubs, which grew in forests under the shelter of other trees. Glancing at the opposite latitudes—the tropics—we may at first suppose the case is different, as in the hotter parts of South America, East and West Indies, the trees have broad, expansive foliage. But here it should be borne in mind that the atmosphere is extremely humid, which counteracts the effects of intense heat upon the foliage. Recent explorations in Australia tell us that the heat of that country is much greater than those I have been describing; indeed, among the hottest in the world! This intense heat is extremely arid, and must as a consequence be very trying to vegetation; but nature ever correct has given a twist to the petiole or stalk of the leaf, which makes that stand on edge, with both sides equally exposed to the air and light, and both sides of the leaf are much alike. This is more generally true of the trees of Australia, but not of the shrubs. Now for what purpose has nature done this, if not to turn off the intense arid rays of a burning sun, which would under ordinary circumstances destroy the foliage? From this I think we may argue that small-leaved trees, such as conifers, will also stand more heat and sun than broad-leaved trees of these regions; and this class of trees we may expect more adapted to our climate, which proves to be the case.

The native evergreens of this country, as the American arbor vitæ, American yew, white pine, and even the most beautiful of our evergreens the hemlock spruce, have a pale rusty brown appearance during the winter. Many will perhaps think I am not doing the hemlock justice in writing thus much; but had they seen it grouped side by side with the dark, rich, grassy green foliage of the Californian pines, such as *Pinus insignis*, or many of the eastern conifers, they would see more plainly the force of my remarks. It is not my wish to depreciate the beauty of this tree, if I could do so; beautiful it truly is, yet justice compels me to say, in point of coloring it must give place to the conifers of other regions. What are the causes which produce this rusty appearance I have been describing? I have no hesitation in ascribing it to the cold of winter. The *Cryptomeria Japonica* is a good illustration of this. Grown in the open air in this country or Britain, it assumes that disagreeable rusty appearance through winter; in a green-house it retains its green color through winter, also in some of the milder parts of Britain. I have seen plants in the open air in that country as rich a green in the month of March as they had been in the early fall previous. This I have observed upon the same grounds,—where the plants were sheltered, they retained their green appearance; where more exposed, they became rusty. California having a mild climate, its native trees retain through winter their rich green appearance. This the conifers from the Mexican mountains also do, as well as most of the conifers and other shrubs of Europe. The Himalayan conifers retain as well through winter their beautiful green. Not so with the conifers from China; most assume in winter and early spring that disagreeable appearance I have been describing. What cultivator has not observed this with the Chinese arbor vitæ (*Biota orientalis*)! In early spring, after passing through a severe winter, this appearance is common to it, though in the previous fall it had a beautiful green appearance. The case of the

Cryptomeria has been already noticed. If, therefore, the beautiful and graceful hardy conifers of Asia are worthy of culture, how much more so are those which retain their charming verdant color through the very depth of winter.

(To be continued.)

STRAWBERRIES.

BY WM. R. PRINCE, FLUSHING, N. Y.

I HAVE perused the notices of many varieties of strawberries in your journal for previous months, and in other periodicals, but have not seen any satisfactory and conclusive details, such as would impart to the reader the full knowledge requisite to make his selections *understandingly, and with absolute certainty*. Some excuse may be alledged in consequence of the last season having been particularly unfavorable, and of the limited period that has in most cases been devoted to these investigations. I shall not in the present article discuss the subject of sexuality and relative productiveness, but will leave that for a future communication, and confine myself in this solely to describing the characteristics of a number of varieties, so as to enable amateurs who are not already conversant therewith, to make appropriate selections for the objects they have in view—be it as regards large crops for market, or for plentiful family use, or for insignificant crops to merely gratify the fancy. The varieties which have an asterisk attached were originated by myself from seeds during the last eight years. *p* denotes the pistillate varieties. *h* and *p* denote those varieties which combine plants of each sex, and all the others are hermaphrodites or bisexual, and may be used as fertilizers.

*1. *Le Baron*.—Vigorous growth, very large, dark scarlet fruit, sweet, rich, melting. Highest flavor of all, and very productive.

*2. *Triumph*.—Fine large fruit on strong stems, beautiful color, very productive. This is a seedling from the *Early Scarlet*, and a great improvement on it, being twice as large, and thrice as productive, and very valuable. It sometimes produces a partial crop in autumn.

*3. *Charlotte*.—Rather large, dark scarlet, delicious sprightly flavor, productive, but with very short peduncles. *p*.

*4. *Superlative*.—Medium size, being the same as *Burr's New Pine*, of which it is a seedling, but is more vigorous and more productive than its parent. Berries light scarlet, of a rich and spicy flavor. *p*.

*5. *Coronation*.—Very large, bright scarlet, ovate, tart but pleasant; on strong peduncles. Estimable.

*6. *Magnifique*.—Very large, orange scarlet, rounded, very productive. *p*.

*7. *Monstrous Swainstone*.—Vigorous foliage, very large scarlet berries, delicious flavor, productive.

*8. *Maximas Swainstone*.—Very large, deep crimson, high flavor, moderate bearer.

*9. *Twice-Bearing Swainstone*.—Early, medium size, scarlet, oblong cone, rather acid. Very productive. Second crop in September.

10. *Merveille (Pelee)*.—Very large, scarlet, oblong cone, beautiful, rich and high flavored. Good bearer. This is the largest and most celebrated French variety.

*11. *Primate*.—Large, deep scarlet, beautiful, very productive. A good fruit for market, of vigorous growth and luxuriant foliage.

12. *Crimson Cone*.—Fair size or rather large, oblong cone, bright crimson, beautiful, rather acid without sugar, the seeds deeply embedded. It is of very vigorous growth and very productive. P. There is a hermaphrodite variety which is less productive, but which should be used as a fertilizer for the pistillate.

*13. *Primordian*.—Resembles its parent the *Crimson Cone*, but is much earlier. It is very productive, but the fruit is rather soft for carriage to market. P.

*14. *Crimson Pine*.—Large, conical, deep scarlet or crimson, sweet, rich. Very productive. H and P.

*15. *Cornucopia*.—Very large, scarlet, conical, beautiful, good flavor, firm, suitable for market. A seedling of the *Hudson*. P.

*16. *Cluster Hudson*.—Fair size, conical, scarlet. Very productive. P.

*17. *Champion*.—A splendid seedling from the *Montevideo Pine*, very large, scarlet, oblong cone. A fair bearer for this class, and ripening gradually for three weeks. The growth is vigorous.

*18. *Estelle*.—Secondary size, crimson, conical, productive, peculiar flavor. H and P.

*19. *Profuse Scarlet*.—Same size and color as *Large Early Scarlet*, and much resembles it; of fine flavor, and produces twice the quantity of fruit resulting from its sexuality. P.

*20. *Sylphide*.—Very large, light scarlet, rounded or short cone, beautiful, excellent flavor, productive.

*21. *Spiral*.—Good size, elongated cone, pleasant flavor. Usually produces a second crop in September.

*22. *Tivoli Scarlet*.—Very large, oblong cone, beautiful. Estimable. Very productive. P.

*23. *Unique Scarlet*.—Purse-shaped, light scarlet, rich flavor, moderate bearer.

24. *Bishop's Orange*.—The true variety is round, of moderate size and beautiful orange scarlet color, not high flavored, but a profuse bearer, and particularly desirable as one of the later varieties that follow the general crop. There is a spurious variety cultivated at Rochester and at Boston under this name, which we published in our rejected lists many years since. P.

25. *Boston Pine*.—Large and splendid, of beautiful color and fine quality. It will produce a fair crop on a strong soil, if kept free from runners. It is one among the many important acquisitions for which we are indebted to the Messrs. Hovey, of Boston.

26. *Hovey's Seedling*.—It seems almost superfluous to describe this very large and splendid crimson variety. The foliage is broad and luxuriant, not as tall as most other varieties. The berries are rather dark colored for a market fruit, and vary

greatly in size at the different pickings, and they are not as high flavored as the preceding variety. It is however so large and productive, that but few will be willing to dispense with it. P.

27. *Huntsman's Pistillate*.—A seedling of *Montevideo Pine*, very large, short cone or rounded, bright scarlet, indifferent flavor. Very productive. P.

*28. *Triumphant Montevideo*.—Monstrous size, ovate, deep scarlet. A fair bearer for this class, which ripens its fruit gradually. There are several other fine varieties known as the *Colonia*, *Cordova*, *Parana*, &c.

29. *Crescent Seedling*.—This being newly introduced from the south, its merits as regards a northern climate require further trial. The plants have not as yet shown any *perpetual* character here. *Hovey's Seedling* has proved equally as perpetual or long-bearer at the south as the *Crescent*, the climate apparently imparting that character.

(To be continued.)

DR. BRINCKLE'S NEW RASPBERRIES.

BY HON. MARSHALL P. WILDER, BOSTON.

YOUR favor is received, and I cheerfully respond to your request. As you suppose, I had the gratification to examine, last season, while in fruit, some of the seedling raspberries, raised by our mutual friend Dr. BRINCKLE, of Philadelphia. I herewith annex a description of such as were then at maturity. As you are aware, these plants were grown in a limited space, being on the narrow borders of a paved yard, and therefore not susceptible of receiving the beneficial influences which accrue from open cultivation. What effect the latter would have, and whether their characteristics will remain the same, or whether the respective varieties will improve or deteriorate, time and experience only can decide. It is reasonable, however, to conclude, that some of these varieties will prove great acquisitions to our list of raspberries. When we consider the great improvement which has taken place within a few years by the hybridization of the strawberry, we may anticipate a result quite as favorable with the raspberries of Dr. B.

These are of various shades of color, from rich dark crimson, to transparent white. But the color of the *Orange* pleased me more than any other sort, having that peculiar tint which distinguishes the dawn of day. The superior flavor, size, and productiveness, of several of these varieties, is quite remarkable, and shows the great susceptibility there is of improvement in this class of fruits, particularly in the multiplication of kinds, ripening at different times in the season. The success which has crowned the few efforts which have been made to produce from seed new fruits adapted to our soil and climate, afford encouragement to cultivators to speed this branch of improvement. Let them generally evince the same zeal which has distinguished our friend in the discovery of native fruits and the raising of new and improved varieties, and our country would soon be filled with more valuable and appropriate sorts, than

the thousand far-famed varieties which appear in the foreign catalogues. Give us the same enterprise, intelligence and assiduity, which characterizes the labors of Dr. BRINCKLE, and we should, instead of importing ship loads of trees and plants from Europe, soon be in the way of reciprocating the favors of our trans-atlantic brethren by sending back some "*coals to New Castle.*"

The following eighteen varieties are the best of Dr. B's seedlings that have yet fruited, and are arranged in the order of their ripening. They are all of fine quality, but the position they occupy may accelerate or retard their natural period of maturity.

Woodward.—This is one of the smallest of the varieties, though larger than the ordinary wild raspberry. Round, sometimes roundish ovate, crimson. Red spines. Has ripened as early as the 10th of June.

Walker.—Large, round, deep crimson, solid, adheres firmly to the stem, keeps long in perfection on the plant, bears carriage well. Promises to be valuable as a market variety. Red spines.

34 A.—A seedling of the *Orange*, which it closely resembles in every respect. White spines.

Orange.—Large, conical, sometimes ovate, orange color, shaded with rose. Generally reproduces its kind from seed. White spines. Very handsome.

33 X.—Seedling of *Col. Wilder*, and very similar to it in size, form, color and general appearance, but too tender for market purposes. White spines.

Col. Wilder.—Large, roundish, brilliant, semi-transparent, cream color. White spines. Productive.

Mrs. Wilder.—Seedling of *Col. Wilder*; has its brilliancy and general appearance, but is rather larger, and perhaps a shade deeper in color. White spines. Beautiful.

35 H.—Seedling of *Cope*. Large, obtuse conical, crimson. Profuse bearer. Red spines.

Cushing.—Large, conical, crimson, a twice-bearing variety. The second crop is grown on a shoot of the same year. It will scarcely mature the second crop in New England, but it frequently does at Philadelphia, and would no doubt invariably do so further south. Red spines.

Longworth, (33 J.)—Seedling of *Col. Wilder*. Large, round, deep crimson. Red spines.

Mrs. Ingersoll, (32 P.)—Large, conical, fair yellow. White spines.

35 L.—Seedling of *Cope*. Large, roundish, light crimson, with considerable black. Red spines.

Fulton.—Seedling of *French*. Large, round, crimson, productive, vigorous grower. Red spines.

Gen. Patterson, (33 M.)—Seedling of *Col. Wilder*. Large, round, crimson. Does not part readily from the stem. Vigorous grower, very productive. Red spines.

33 G.—Seedling of *Col. Wilder*. Large, round, yellowish, inclining to flesh color when fully ripe. White spines.

Emily (33 E.)—Seedling of *Col. Wilder*. Large, conical, sometimes round, often

shouldered, which distinguishes it from the other varieties, light yellow. Vigorous grower; very productive. White spines.

Cope.—Large, conical, crimson. Red spines. Foliage of a lighter green, and more deeply serrated than any of the others.

French.—Seedling of *Fastolf* crossed with *Yellow Antwerp*. Large, round, crimson. Red spines. Very hardy. Very late.

I must not omit to mention a peculiarity, which Dr. B. has noticed, and which illustrates the great propensity of the raspberry to "*sporting*," namely, that he has never obtained a yellow fruited variety from its seed, but some of its grand-children have borne fruit of this color.

TREES FOR STREETS.

BY EUSTIC.

I AM much pleased with the *Horticulturist*, and particularly the suggestions in relation to water for ornamental purposes, and the planting of ornamental trees. In regard to both, we as a nation are in our infancy, and anything which will work a revolution I shall hail with pleasure. With your leave I will make a few additional suggestions in relation to trees for streets and avenues, and likewise recommend a few favorites in addition to your list.

In planting trees on the road, one important idea seems to be generally overlooked, and that is adaptation to situation and soil. My first attempt at transplanting forest trees was to set a row of sugar maples each side of the road, 2 rods apart, making in all 140 trees, anticipating a fine avenue in a few years; but what was my disappointment to find invariably, that where the land was too moist for wheat, and much of it was, the trees died. The rest grew finely. Now we need some tree adapted to these moist spots which occur so frequently on most of our roads, and I know of no tree better for the wettest spots than the yellow or golden willow.* It is easily propagated by cuttings, and grows the most rapid of any tree that I know of. I have one which has been set some fourteen years, which is five feet three inches in circumference, forty feet high, and the top forty feet in diameter. It has a lively and pleasant appearance, especially in early spring, and contrasts finely with the red or soft maple which is likewise a good tree for moist soils.

I am surprised that the black walnut has been overlooked as a street tree,† easily propagated from the seed, very rapid in its growth, with a spacious head and beautiful foliage; and I never saw a more splendid tree than one of these on the Chemung river, loaded with fruit resembling the pear.

The white walnut or butternut, is also a fine tree, and the nuts of both are excellent. The wild red, or pigeon cherry, is a fine tree, grows rapidly, very beautiful flowers, is not infested with caterpillars like the wild black cherry. Beautiful in winter on

* Very well for a country road-side, but unsuitable for side-walks near houses. We prefer the soft maple.—Ed.

† All fruit bearing trees are objectionable as street trees, unless perhaps in the country.—Ed.

account of its reddish brown bark. It would make a fine tree for lawns, were it not for its disposition to throw up suckers, which it does not seem to have when planted in the street. I set some fourteen years since, one of which is three feet four inches in circumference, and over thirty feet high.

THE BLACK BIRCH, vs. THE TULIP TREE.

BY ELI MOORE, SOUTHTON, CONN.

"The fragrant birch above him hung
Her tassels in the sky."—*Bryant*.

In the August number of the *Horticulturist*, I noticed an article entitled "Shade Trees in Cities," and headed, "Down with the Ailantus;" on which the writer (who I suppose to be the late A. J. DOWNING,) seems disposed to encourage the planting of more of our native forest trees in preference to those of foreign production, and it is a feeling in which I strongly sympathise; but among the trees enumerated I see no mention of the black birch, which is one of my favorite trees, and which I think holds a high rank in our forests, and is deserving the attention of every horticulturist. The beauty of its foliage from the time it first "hangs its tassels in the sky," to the end of summer, when its numerous and stately branches with its dense mass of fibrous boughs, and its still thicker mass of beautiful leaves, through which the rays of the sun cannot penetrate, its neat appearance, its cleanly habits, together with its sweet fragrance, render it to my taste, one of the most inviting shades in the American forest.

There is a cry raised in my neighborhood, "Down with the tulip tree;" but I say, "Woodman, spare that tree." NORMAN PORTER and ROSWELL MOORE, both of Berlin, make serious complaint of the filthy habits of this tree, rendering every thing dingy and even black for several yards around it, and say they must cut it down. I plead for it "yet a little longer," endeavoring to persuade them "not to hack it down;" for whether it is owing to some obnoxious insect which it invites, (as appears to be the case,) which might be exterminated, or to peculiar seasons, to location, proximity to buildings, especially to white, or whether it is its nature to shed this blight from its own foliage, is a question which you probably or some of your correspondents can answer. Please enlighten your readers upon the subject.

The common soft maple is another beautiful tree, and for most grounds it appears to me it has not received that attention it deserves. It makes an excellent shade for man or beast, and what more beautiful than its foliage, its flowers in the spring, and its leaves in autumn! There are seasons in the year I would gladly have my house surrounded with them in one dense forest, with the red-winged blackbird among their branches, pouring forth its melodious strains, giving place occasionally only to the fragrant birch.

Since writing the above I have seen several articles on the subject of shade trees, and various kinds of forest trees named as being worthy of transplanting, and the black birch not among them. I think it deserving of more notice.

Editor's Table.

DESIGN FOR A MARINE VILLA.*—This design, prepared for a gentleman residing in New York during the greater part of the year, is now being erected and is approaching completion at Newport, Rhode Island. The site it occupies is several acres in extent, stretching to the sea-shore, and commanding a fine uninterrupted view of the Atlantic. This plot of ground, now being laid out and planted, is nearly level, and has an abrupt and almost vertical fall of fifteen or twenty feet to the beach. As a natural consequence, the surf close to the shore does not come prominently into notice till the margin of the cliff is reached, and there is therefore more of massive breadth than of variety or picturesqueness in the general aspect of the place. Except in very rough weather, the effect is calm, peaceful, and suggestive of the dignified repose of the ocean as a whole rather than of its restless excitement in detail; it was therefore thought desirable in the design for the house, to avoid irregularities and smallness of parts as much as possible, and to give more prominence to the horizontal than to the vertical lines of the composition.

The plan may be thus briefly described: A wide carriage porch affords a covered entrance to a vestibule and roomy hall, the latter communicating directly with the principal rooms and staircase. A dining-room, cabinet, and drawing-room, are arranged *en suite*, and leave access to an arcade and lawn on the front facing the sea. The drawing-room and a morning-room, purposely disconnected with it, open on a large veranda or pavilion that traverses the south front of the building. It is not unusual in Newport to hear it stated that the climate scarcely requires verandas, and that the summer heat is seldom if ever excessive. There is doubtless some truth in this, and a veranda all round a house, as at the south, would be undesirable. Nevertheless, an uninclosed covered promenade is in many ways a decided advantage to a country house; and since it can generally be arranged, as in this case, that the rooms shall not depend entirely for light on windows that are covered by a veranda, its addition seems a clear gain in comfort. The dining-room is in connection with a pantry communicating with the kitchen wing, and a corridor from the large staircase hall leads to a small bed-room, private staircase, &c., and to the offices and servants' staircase.

The chamber plan is divided into bed-rooms and dressing-rooms; and a bath-room, &c., is arranged in the wing, a portion of which is appropriated to bed-rooms for the family, the remainder being devoted to the servants. Two rooms are fitted up in the basement, the rest being occupied by cellars, furnace, &c.

The house is built with hollow brick walls, a superior face brick being used, with brown stone dressings, porch, &c. The veranda, arcade, and bay windows, are of wood.

The contract, including plumbing and painting, was taken at a little over \$20,000; and the house when completed, with additions, furnace, papering, &c., will probably cost \$2,000 more.

* See Frontispiece.

FRENCH VEGETABLES.—We have obtained from Paris seeds of the vegetables figured in our frontispiece, and we shall take pleasure in supplying those who desire them with a small quantity, sufficient for a trial, on application by mail or otherwise. They were grown here from seed imported by us last year, and received especial commendation by the committee on vegetables of the Genesee Valley Horticultural Society.

TREE PLANTERS AND NURSERYMEN.—We have been requested to publish the following article, written for the *Genesee Farmer*, and we cheerfully comply, as it is a matter of importance both to sellers and purchasers of trees:

"There is one point about nursery trees, that gives rise occasionally to considerable discussion between the buyers and sellers, and it has occurred to us that it might be well to offer a few remarks on it at this time. We allude to the dissatisfaction and disappointment that purchasers experience on receiving from the nursery trees of a somewhat crooked or irregular growth, or of smaller size than they had expected. We are very well aware that it is not a little aggravating to receive trees of four feet in height, instead of six or eight as expected; or to get them with stems curved and twisted in half a dozen different ways, instead of being as straight as a gun barrel. To the amateur who intends to make but a small plantation, and desires every tree to be a model, this is particularly provoking; and in his trouble, unless he be as patient as Job, he reproaches the poor nurseryman most severely. Now we are not about to plead the cause of the nurserymen; they must take care of themselves. They are, we know very well, often much to blame, and deserve reproach; but they are not unfrequently censured without good reason; and if those who purchase trees would study beforehand the characters of the varieties selected, as to growth, they would not so often be disappointed.

"Now we will suppose, for instance, that Mr A. orders from his nurseryman a dozen apple trees, as follows: *Early Joe*, *Summer Rose*, *American Summer Pearmain*, *Fall Pippin*, *Gravenstein*, *Porter*, *Baldwin*, *Fameuse*, *Northern Spy*, *Newtown Pippin*, *Melon*, and *Red Canada*; and that these are to be, we will say, three years old from the bud or graft. We would find that the *Gravenstein*, *Baldwin*, *Fall Pippin*, *Fameuse*, and *Northern Spy*, which are strong, rapid growers, are large, thrifty, beautiful trees; while the others, which are remarkably slow growers, are not more than half as large, and will be pronounced small, scrubby, stunted things, not fit to be seen, much less planted. A *Baldwin*, *Gravenstein*, or *Northern Spy* will be larger in the same soil and under the same culture, in three years than a *Red Canada* or a *Newtown Pippin* in five; and at any size, their stout shoots, straight trunk, and smooth clean bark, are pleasing to the eye; while the slender, twiggy, rough-barked trees, are just the reverse. These considerations should be taken into account. The nurseryman is paid no more for the slow growers than he is for the rapid growers, and it is not reasonable to expect them so large or looking so vigorous. Then there are varieties, such as the *R. I. Greening* and *Fall Pippin*, of irregular growth, with very seldom a straight stem, that it is quite unreasonable to expect as symmetrical as a *Baldwin* or a *Northern Spy*.

"If we turn to pears, we find these remarks equally applicable. If Mr. A. will order from his nurseryman the *Bartlett*, *Seckel*, *Buffam*, *Duchess d'Angouleme*, *Marie Louise*, and *Winter Nelis*, he will find a marked and perhaps to him a very disagreeable contrast in their size and form. The *Buffam* and *Duchess* may be eight feet high, thrifty, and smooth as young willows; the *Bartlett* not over five feet, and the *Seckel* four; while the *Marie Louise* and *Winter Nelis* will not only be small, but twisted into the most fantastic and untree-like shapes. Looking at the *Buffam* and the *Duchess*, he will at once say, 'Now these are what I call trees—just what I wanted; but these,' turning to poor *Marie Louise* and *Winter Nelis*, 'these are horrible.' The nurseryman, who perhaps searched up and down every row in his nursery to get the straightest and best ones to please Mr. A., who is very nice, is sure to get not less than two pages of a scold;

and not only that, he must lose a part of his bill and ever after the trade of one whom he hoped would be a good customer.

"Turn again to cherries, and we find the same sources of disappointment. Mr. A. wants half a dozen cherry trees—tall, handsome, well-shaped trees, of uniform size and shape, as he intends them for ornament as well as fruit. Well, he orders *Black Tartarian*, *Yellow Spanish*, *Napoleon Bigarreau*, *May Duke*, *Belle de Choisy*, and *Belle Magnifique*—all first rate cherries; but unfortunately, when they are received, the *Belle de Choisy* and *Magnifique* are mere dwarfs beside the majestic *Black Tartarians* and *Napoleons*. He then regrets he ordered them, and blames the nurseryman for not knowing better than to send them.

"So with plums. No one need expect to get *Green Gages* and *Jeffersons* of uniform size with *Imperial Gages*, *Smith's Orleans*, or *Magnum Bonum*. If they do, they will generally be disappointed.

"Those who regard the size and shape of their trees of the *first* importance, must not be very tenacious about varieties; and, on the contrary, those who place *quality* first, must be less difficult to please as to size and form. The reasons are obvious. There are certain requisites, however, which purchasers have a right to demand from the nurseryman under all circumstances. These are—1st, That trees be sound and thrifty, stout in proportion to their height, and supplied with an abundance of healthy unutilated roots. 2d, That the varieties be genuine. 3d, That they be packed and prepared for transportation with the greatest possible care and skill. The purchaser who fixes his mind on mere *size*, forgetful of these, stands in his own light, and will, if he lives long enough, find out his mistake.

"Would it not be well for nurserymen to indicate, or arrange in separate classes, slow growers and those of a very irregular or crooked growth?

"We throw out these hints for the purpose of drawing attention to a matter that, as long as we can remember, has been productive of disappointment and no little unpleasant feeling that might just as well have been avoided."

A NEW SEEDLING GRAPE.—In *Hovey's Magazine* for March we have a very interesting article on the season of 1852, with notes on new fruits, by the Hon. J. S. CABOT, President of the Massachusetts Horticultural Society, from which we extract the following:

"A. W. STETSON'S SEEDLING GRAPE NO. 4.—Mr. STETSON, a most enthusiastic and skillful cultivator of the vine, has devoted much of his attention to the production, from seed, of a new hardy grape, worthy of, and suited to, general cultivation—one that, combining richness of flavor and other good qualities with that of a reasonable assurance of ripening in the open air, having been considered by cultivators of this fruit a desideratum. Thus far, Mr. S., judging from specimens of that designated above as No. 4, seems to have been successful in the attainment of his object; and it gives promise, if attempts similar to those heretofore made by him are continued, of a result that shall be the full fruition of his wishes. This grape is understood to be an offspring, in the third generation of seed, of the common wild grape hybridized with the *Black Hamburg* and other imported varieties; and it seems highly probable that the fruit of the next generation may possess all the qualities desired, should the experiments of Mr. S. be thus far pursued. This grape is of a dark purple or black color, with both bunches and berries of good size, very sweet, in flavor resembling the *Isabella*, and in quality equalling if not surpassing that variety. The vine is very hardy and very prolific. The fruit hangs long on the vine without shrivelling, having been thus kept perfectly plump and fine as late as Nov. 25. This grape was exhibited by Mr. STETSON, at the Rooms of the Horticultural Society, on the 4th and 11th of September, and also at the annual exhibition of the Society on the 25th of that month, and, as it is believed, is one that may with safety be recommended, to both amateurs and cultivators of this fruit, as an object worthy of attention."

Mr. CABOT describes the following pears as giving promise of excellence: *Inconnus Van Mons*—a winter variety. *Delices d'Hardenpont*—Nov. and Dec. *Suzette de Bavay*—winter. *Docteur Capron*—Oct. and Nov. *New Long Rose Water*—Nov. and Dec. The Tea pear of New Haven, *Beurré Clairgeau*, *Nouveau Poiteau*, *Beurré Montegeron*.

Beurré Merode is synonymous with *Doyenné Boussock*, *St. Nicolas* with *Duchesse d'Orleans*, and *Henri Nicaire* with *Bartlett*. The *Soldat Laborer* and *Josephine de Maline* he speaks unfavorably of. The first has not been fine with us; but the latter excellent, though small, so far.

THE following article is by an intelligent observer of nature in all her varied and beautiful forms. We hope to enliven and enrich our pages with other articles from the same source, when the forest shall appear in its beauty.

FOREST GLEANINGS—April and April Flowers.

BY MRS. CAROLINE F. TRAILL.

"The pine hath a fringe of softer green,
And the moss looks bright where my steps have been."—*Hemans*.

The month of April in Canada is decidedly the least agreeable one in the whole year. It is often cold and cheerless; or if a few sunny, warm days present themselves, they are too often the precursors of biting winds and showers of snow and sleet, which put a bridle on the earth, and hold vegetation in check. This month does not display the same peculiar features as in England; with us it is not

"April suns and April showers,
That fill the lap of May with flowers."

We miss those balmy breezes laden with the odors of the violet, the primrose, and the blue bell;—those deep blue skies, rendered more lovely by the big silver thrones, as we used to call the white clouds that are so often seen in April skies, casting their hasty shadows over the streams and young fields of wheat; now for a few moments veiling the sun, then as suddenly passing away, leaving his face more glorious than before. We miss the music of the feathered choir at early dawn, and all through the livelong day. We miss the busy murmur of the bees in the bosom of the golden crocus, the starry blossoms of the little celandine on green banks by the way-side, and the daisies that powder over the meadows like snow showers.

Yet, though we lose all these sweet sounds and sights, we must not be ungrateful. Our Canadian April, though colder and even more capricious than her sister of the isles, also has her charms for such as will seek them with cheerful faces and contented hearts. It is her breath that unlocks the frozen lakes and loosens the icy streams—that rids the earth of her snowy burden—that causes the sap to flow and the buds to swell, ready for expanding the leaves that have been closely shut up in their downy cradles during the long winter months.

At the voice of the flowing streams the hardier emigrants begin to flock in. The wild ducks are splashing the newly opened waters with their wide wings; and see! the little song-sparrow (*Fringilla melodia*) is flitting to and fro on our garden bushes, with the neat snow-bird (*P. nivalis*) and little brown wren (*Troglodytes fulva*); all singing a low sweet song of joy and gladness, as they flit to and fro, now searching for seeds upon the withered stalks of the rough amaranth or tall mullein, or on the mossy branches for insects. Now may be heard, on warm days, the incessant rapping, tapping, and hammering of the wood-peckers, both the red-headed (*Picus erythrocephalus*) and the little downy spotted and midland wood-peckers; the soft, low, plaintive, note of the chickadee; or the bold, full, musical swell of the song-thrush and meadow-lark; with many others that I could name. Listen to that hollow sound; it is like the booming of very

distant thunder, yet the sky displays no thunder-clouds. What can it be? In the forest, there, just at the edge of the cedar swamp, elevated on a fallen log, is the author of the mysterious sound; it is a drummer—the male of the ruffed grouse, commonly known by the name of Canadian partridge. He is beating his breast with his expanded wings, and setting up his shining dark ruff, to allure a distant mate from the depths of the cedar swamp. He has been feeding on the soft red berries of the trailing arbutus, and stripping the red bark from the wild raspberries that grow on yonder upturned roots.

The evergreens are changing their spiny leaves, and sending up new, vigorous shoots from the end of every branch. The white pine shoots measure about fourteen inches. During the spring, the last years shoot casts off its spiny covering, and the new growth is seen, like a green tassel, above it. By measuring the length of the annual shoots of these trees, the age of a large pine may be pretty nearly calculated.

The catkins of the willows, birches, poplars, and alders, come out during this month, if the season be not too severe. But there is often a great difference in the forwardness of vegetation in this month. In the year 1833 the woods were almost free of snow. In the beginning of April sugar-making was nearly over; hepaticas, spring beauty, and violets of several colors were in bloom; and the leaves of the hard wood trees were many of them expanded by the 4th of May. That was the earliest spring that I remember. 1834 was like it; but on the 14th, 15th, and 16th of May, the wind changed to the northwest, a severe frost bound up the earth, and snow fell to a depth of several inches. The forest was out in leaf, and I had young chickens hatched, which died, all but four, from cold. Nevertheless, we had a splendid summer, and many trees put out new leaves—among these were willows and poplars.

Of our earliest flowers, there is none that is more lovely to the eye than the hepatica, (*Hepatica Americana*), commonly called snow-flower by the Canadians. Its tufts of blue, pale pink, and white blossoms, may be seen in warm Aprils, on every grassy mound, on turf knolls formed by the wind-fallen trees, by way-side fences, and in the partially cleared forest, its starry flowers waving with every gentle breath that passes over them. What the daisy is to the English meadows, the hepatica is to our Canadian clearings—it is a harbinger of spring.

"It tells us that winter, cold winter, is past,
And that spring, lovely spring, is returning at last."

Of all the early Canadian flowers, I love the pretty hepatica best. Next, and by many most admired, is spring beauty, (*Claytonia virginica*.) Its delicate, graceful, striped pink bells may be seen during the latter part of April, on sunny meadows. It loves the shelter of old decaying timbers, and is often to be found just peeping from beneath the overshadowing side of a mossy log, yet willing to expand its petals towards the warm sunshine. It was among the first spring flowers that attracted my attention. About the same time comes forth, in rich, moist soil, just at the edge of the forest, and even encroaching a little within its bounds, the pure white flowers of the *Sanguinaria*, or blood-root. It breaks the ground folded within its vine-shaped leaf, which is veined with pale orange color; and if broken, both leaf and stem and root exudes a bright scarlet juice. It is with this that the Indian squaw dyes the orange and red tints in her baskets, mats, and quilla. The flower, on a small scale, resembles the white crocus. It was among my first favorites. The *Erythronium*, or dog's tooth violet—that very elegant single flowered lily—comes next; and then there are some early life-everlastings, and violets white and blue, and low-stemmed creeping ranunculus, with many other small and less attractive flowers.

As the snow melts away, the green leaves of many plants that have been nursed by its friendly covering may be seen. The various species of wintergreens, the delightful *Pyrolas* and *Chimaphilla*, the creeping arbutus, *Mitchella repens*, (thorn-berry) and the sweet, spicy wintergreen with its gay red berries and shiny leaves, all as fresh and vigorous as though they had been perfecting their winter toilet within the sheltered canopy of their snowy chamber to do honor to the new-born spring.

We are apt to think that vegetation lies dormant during the winter months. Her powers, I should think, were not entirely suspended; the perfecting of leaf and flower buds may be slowly but surely proceeding. On mild, warm days, the ascent of the sap is felt, for I have heard of maple sugar being made early in the month of February. Even those animals that hybernate, experience the vivifying influence of a change of temperature, from extreme cold to warmth, and come forth for a few hours or days to recruit themselves. During these intervals of sunshine and warmth, doubtless the vegetable life becomes quickened and the results of her operations manifest themselves in due season.

It is during the month of April that the animals that have been locked up in winter's sleep come forth. The squirrels may then be seen running along the rail fences, or on the logs; the little chipmunk chasing his fellows among the fallen timbers, full of playful glee; the deer steals out from among the budding under-wood, crosses our clearings, and leads his companions to the margins of our lakes and pools; the lakes and rivers are alive with fish, and dark nights are illumined by the torch of the Indian, in his bark canoe, as he quietly glides over the surface with his well-poised spear dealing the death blow to his scaly prey.

We hail April with gladness because we know that the reign of winter is at an end, and even though he sometimes reappears and frowns upon us, it can be but for a short season, and that bright days and sunny skies, and all spring's joyous things, are in store for us. April might be called the month of many hopes. Where the season is sufficiently mild, seeds of various kinds are sown or the ground prepared for them. It is also the season of grafting.

"By the violet's soft perfume,
By the fragrance of the broom,
By the blossom on the bough,
By the hillock's flower-crowned brow,
And the young leaves' verdant pride,
And a thousand traits beside
Of purest joy and holiest mirth,
Spring, creation hails thy birth!"—*Agnes Strickland.*

EXCRETIONS OF PLANTS.—I must be a poor, very poor, physiologist, since, with all my patience in reading over and over again and trying to understand something about the article "on the excretion of plants," published in your February number, I know not much more than before; that is to say, I do not understand of what importance it would be to agriculture, etc., to know with certainty that the excretions of plants are poisonous to the soil. Would that certitude render the soil any better for raising crops, without any antidote to the poisonous excretions—I mean without any manure! If so, the excrementitious doctrine is good to know, and I will likely agree with Dr. LINDLEY and others.

One more question:—Is any one who understands that soils become exhausted, by being constantly cropped with one kind of plant, a physiologist? If so, we are all more or less physiologists. Whether, that besides this knowledge, we should believe, with some, that the deterioration of the soil is caused by the doubtful *deleterious excretions* of the roots, or by their more probable *excessive absorption* of the nutritive gases; or, with some others, that sourness is only the result of an acid, without any doubt caused by a superabundance of water!

Let us suppose now, that we should all be of one opinion about those physiological subtleties, where would be the good of it? Would the soil be more or less fertile? No! Then wherefore those digressions about finding a knot in a bulrush. If the advocates of those two different doctrines should give us the means of re-establishing the fertility of deteriorated soils, whether the exhaustion be the result of poisonous excretions or enervating absorption, some good might be effected. But no, the only thing we get from those doctors' arguments are quotations from all quarters, all probably very exact, but which taken together, in my opinion, would not be as

good for any *poisoned* soil as simple rotation of crops, deep tilling, and animal excrements; and draining and frequent hoeing for the acid or sourness. **SIMPLEX**.—*Albany, N. Y.*

We have great faith in the efficiency of *rotation of crops, drainage, deep tillage, manures*, and general good culture, for exhausted or defective soils. Nevertheless, we cannot treat a question that has deservedly attracted so much the attention of ardent philosophic minds, and one that however unsettled it may be has an important bearing on cultivation, so lightly as our correspondent "Simplex" appears to do.

FRUITS AT THE SOUTH.—I have been cultivating pear trees for about 15 years, and during that period, out of near one hundred varieties, I have found only the *Rousselet de Rheims* and *Verte longue panachée* to escape entirely from blight; even the *Bartlett* has suffered on one tree. Both these varieties are vigorous growers and good bearers every alternate year, and the fruits are good—sometimes first rate—but uneven in quality, some being much better than others, though none below fully second rate. The *Rousselet de Rheims* grows upon the quince equal to any variety. I am still partial to the *Winter Bonchretien*, though it is not mentioned by Mr. Downing. It is a very thrifty grower upon quince, and I suspect does best upon that stock. It bears early and well. The fruit very rarely cracks, and is fully equal to any pear that I have yet tasted—superior, in my opinion, to the *St. Germain*, which has also done well with me; both last until about Christmas.

My friend, Mr. ROBERT HARWELL, was rated for saying that northern peach trees did not bear as well as southern grown trees. I am sorry to say that my experience fully coincides with his. I have found that pear trees procured from the continent of Europe grow and bear much earlier than trees from Long Island, and are *much less apt to die*. Some varieties procured from Long Island seem to grow smaller every year, and about one-quarter to one-third die the first summer. **ROBERT CHESBOLD**.—*Near Beaufort, S. C.*

APPLES.—MR. CHARLES DOWNING, of Newburgh, in a private letter, lately received, makes the following interesting statements:

I have fruited the past year the following, which all prove to be *Pomme Royal* or *Dyer*, viz: *Tompkins*, of Tompkins county, N. Y., *Beard Burden* and *Mygatt's Bergamot*, of Connecticut, *Bullripe*, of Oneida county, and *Pomme Water*, of Monroe county, N. Y. I find upon inquiry this is a variable fruit. In some sections and soils it is a poor bearer, and is apt to be spotted and knotty; in others, it is always fair and a good bearer. All speak of it, however, as one of the very best for eating.

Another fact is, that *Fall Pippin*, *Holland Pippin*, and *White Spanish Reinette*, are three distinct kinds, although by many thought to be the same. The first is the best apple, but generally a moderate bearer. The *Holland Pippin* is a good bearer, fair and handsome; it is an excellent cooking fruit, and profitable for marketing, but not an eating fruit. The *White Spanish Reinette* is an excellent fruit and by many preferred to the *Fall Pippin*; it is a good bearer; the flesh is a little coarser, but tender, with a brisk, juicy flavor."

Notices of Books, Pamphlets, &c.

REPORT OF THE FIFTH ANNUAL EXHIBITION OF THE MORRISSEUM COUNTY AGRICULTURAL SOCIETY, held in Zanesville, Ohio, October 1892

A County Agricultural Society that can display such a list of members, and such endless columns of entries, is in a hopeful state. More than this, our Zanesville friends have added a Horticultural department to their Society, and the committee are to meet weekly during

the summer. They are also aiding in the dissemination of useful works, by offering as premiums so many of Dr. WARDER's *Reviews* and the other Ohio journals. They are otherwise doing good in many ways, and we hope their example will not be lost on other counties that are yet behind.

The following officers were elected for the ensuing year :

President.—CORNELIUS SPRINGER.

Vice President.—ISAAC DILLON.

Treasurer.—JAMES L. COX.

Secretary.—JOHN BARNAED.

Managers.—WM. DENNISON, of Salem township; ABRAM C. HOWARD, of Washington township; JAMES T. CHERRY, of Springfield township; Col. D. PEABODY, of Salt Creek township; SCAMMON RODMAN, of Hopewell township.

TRANSACTIONS OF THE OHIO POMOLOGICAL SOCIETY. Meeting held at Columbus, January 11th and 12th, 1868.

We are glad that this Society is determined to prosecute its labors. There could be no stronger proof that they are much wanted than the pages of this report. Nomenclature is really in a sad condition. The lists of fruit presented, show some large collections. R. BUCHANAN, of Cincinnati, 48 varieties; A. L. BENEDICT, of Morrow county, 66 varieties; W. B. LISPEY, of Morrow county, 25 varieties. In all, the collection of apples must have been very extensive. The discussions are not quite so practical as those of the Illinois meeting, but nevertheless have elicited many useful facts, which we shall notice hereafter.

WESTERN HORTICULTURAL REVIEW. JOHN A. WARDER, Editor. Cincinnati, Ohio.

The *Working Farmer*, edited by Prof. MAPES, one of our best monthly agricultural journals, gives our Cincinnati contemporaries the following well merited notice :

This is one of the few Horticultural Reviews we can always refer to with pleasure. Its editor, although precise in all matters connected with his art, writes like a man in good spirits, who is not working his way up hill. His style is free from satire, nor is it annoyed by that kind of egotism which we are sorry to see efface some of the horticultural journals of the present day.

CHEMICAL FIELD LECTURES FOR AGRICULTURISTS. By Dr. JULIUS ADOLPHUS STOCKHARDT, Professor in the Royal Academy at Tharand. Translated from the German. Edited, with Notes, by JAMES E. TROCHMACHER. Cambridge: JOHN BARTLETT. 1868.

This book has been laid on our table. We had prepared a notice of the work, which we can not find room for in this number. For sale by D. M. DEWEY, of Rochester.

THE SOUTHERN AGRICULTURIST is the title of a new journal devoted to Agriculture, Horticulture, Pomology, &c., published monthly at Laurensville, S. C. Col. A. G. SUMMER, editor: WM. SUMMER, Horticultural editor. The first number is well filled and well printed. The Horticultural department is particularly varied and interesting—displaying both good taste and sound judgment. We trust it will be well sustained, and we believe it will be, for we have abundant evidence of a very general and active spirit of inquiry on rural matters all over the South. The Southern States have a great duty to perform to American horticulture. Their semi-tropical climate admits of the culture in the open air of a vast number of useful fruits and vegetables, of beautiful trees and plants, that we in the North can only attempt under glass. If they will but turn themselves as energetically to the development of their climate resources as we are doing here, the United States may soon occupy a creditable position in the horticultural world.

Answers to Correspondents.

(J. R. S., Georgia.) **HEDGES.**—In directing osage orange hedges to be shortened or shorn annually, we mean both leading shoots and side shoots; but the latter require less shortening than the former, because they grow with less vigor. The object is to thicken and strengthen the hedge in all parts.

PARADISE STOCKS are grown either by seed or layers—generally the latter—from a small, shrubby species of apple.

DOUGAIN is intermediate between the common apple stock and the *Paradise*. The latter is used when *very* small trees are wanted, and the *Doucain* for trees of moderate size.

CHINESE DWARFING.—We know little about the stocks used for dwarfing in China. The Chinese are wonderfully successful in these matters it is said; and we believe one of the most efficient operations is to start the trees by confinement in small pots, in the same way they are said to prevent the growth of women's feet—by enclosing them in small shoes or bandages that admit of no expansion.

FILBERTS.—We know of no good reason why filberts will not bear in lat. $84^{\circ} 80'$. You must either have a barren sort or mismanage them in some way.

APPLE TREES.—The bark on the side of the tree next the sun, south and south-west, is always brighter colored than on the north side. Young shoots show this more conspicuously. If the natural color be reddish, the south side will be a much brighter red than the north. Some old fashioned planters take especial pains to place the tree in the same position in the garden or orchard as it was in the nursery.

Some of the French writers treat of "orientation" as of much importance; and, in some climates, it may be. A tree turned round—its north side to the south and south side to the north—must feel the effect of it to some extent, and must pass through a sort of acclimating process.

(W. B., Madison, Ala.) *Buchanan's Treatise on Grape Culture and Wine Making.*

Question.—Will some one of experience tell us what is the best wine grape for the State of Alabama?

RAISING EVERGREENS FROM SEED.—I would like to get some information on the best plan of raising evergreens from seed—such as Junipers, Arbor Vitæ, &c. **THOS. THORNTLY.**—*Fallston, Pa.*

The seeds of Junipers require to be put in a "rot heap," mixed with earth, and left one year before planting; then sow in light sandy or peaty soil. The Arbor Vitæ seeds may be sown when gathered, or the spring following, and it will grow the first season. The soil should be a sandy peat if possible. At one season's growth the plants may be transferred from the seed-bed into nursery rows, or into other beds where they will have more room.

OSAGE ORANGE.—In answer to your correspondent in the January number, who asks whether "the Osage Orange is liable to throw up sprouts," I can state that I have had about one hundred yards of the hedge growing for the last three years. It has been cut down annually, according to rule, and is now six feet high in some places, and has never yet thrown up the first shoot. It is not easily propagated from cuttings. I have tried it for two years and not more than one in fifty would live. Perhaps the new method, of putting both ends in the ground and leaving the center above, would prove more successful. The roots do not sprout. I cut off all tap roots when I planted the hedge and carefully planted them, but none came up.—**J. R. S.**—*Clarks-ville, Ga.*

Horticultural Societies.

WORCESTER COUNTY (MASS.) HORTICULTURAL SOCIETY.—The annual meeting of this Society was holden at the Horticultural Hall on Wednesday, January 5, 1883, when the following officers were elected for the current year, viz:

President.—STEPHEN SALISBURY.

Vice Presidents.—WM. T. MERRIFIELD, JOHN C. WHITTIN, of Northbridge, and GEO. T. RICE.

Treasurer.—FRED'K WM. PAINE.

Secretary.—S. HENRY HILL.

Librarian.—C. HARRIS.

Auditors.—GEO. T. RICE, WM. M. BICKFORD.

Trustees.—J. M. Earle, C. W. Forbush, Grafton; Isaac Davis, Wm. M. Bickford, Wm. Capron, Uxbridge; Wm. Workman, Ansel Lakin, Joseph A. Denny, Leicester; L. Burrage, Leominster; Geo. Jaques, Geo. A. Dresser, D. W. Lincoln, A. H. Waters, Milbury; Harvey Dodge, Sutton; Job C. Stone, Shrewsbury; Sam'l H. Colton, T. Bond, North Brookfield; J. N. Bates, Barre; Emory Bannister, Jona. Forbush, Bolton.

From the Treasurer's Report, it appears that the financial affairs of the Society are in a flourishing condition. The Real Estate, consisting of Horticultural Hall and the lot on which it is situated, has cost the Society about \$20,000, on account of which they owe about \$12,400. The building brings an annual rent of \$1,600, with the reservation, for the use of the Society, of the apartment, when the weekly exhibitions and the meetings of the Society and Trustees are held, and also of the main hall for one week, for the annual exhibition.

Admission fees of new members,.....\$161 00

Admission tickets to exhibition,..... 532 23

Sale of Fruits, &c., at auction,..... 56 83

The Treasurer reports that \$600 of the debt was paid last October, and that \$500 more may be paid in April, and \$700 in October; this, as we understand, is a reduction of so much of the principal in addition to the interest. With the income of the Society, the whole debt will be paid off in a few years, leaving them their fine Hall building, yielding an annual rent of \$1,600 a year, clear of all incumbrances.—*Massachusetts Spy.*

CAYUGA HORTICULTURAL SOCIETY.—The first annual meeting of this Society was held at the Court House in the city of Auburn, on the 9th of February, and the following officers were chosen for the ensuing year:

President.—H. T. DICKINSON.

Vice Presidents.—P. R. FREEOFF, GEO. E. BARBER, OLIVER W. WHEELER, Auburn; JOHN MORSE, Aurelius.

Corresponding Secretary.—HORACE T. COOK, Auburn.

Recording Secretary.—S. S. GRAVES, Auburn.

Treasurer.—JOHN S. CLARY, Auburn.

Managers.—WM. OSBORN, L. Q. SHERWOOD, H. H. BOSTWICK, A. V. PULSFETER, WM. CUTTING, Auburn; S. H. HIGLEY, W. D. OSBORN, Mentz; JOHN R. PAGE, Sennett; SOLOMON GILLES, Weedsport.

Auburn is one of those quiet, pretty towns, in the midst of a fertile and beautiful region of country, where horticulture may be expected to receive a large share of attention. There are many good gardens there now, and a large number of zealous and tasteful amateurs, who will ensure success to the Cayuga Society.

LIST OF PRIZES OFFERED BY THE NEW YORK HORTICULTURAL SOCIETY FOR 1853.—We are glad to see New York in the field with such a liberal list of prizes, and we hope they will bring out an active competition. There is no lack of material. There are two monthly shows, a semi-annual show on the 14th, 15th, and 16th of June, and an annual show on the 20th, 21st, and 22d of September. We learn from the *Agricultor* that—

"The regular weekly meeting of the Society was held at the Stuyvesant Institute on Monday evening, Feb. 7th, N. R. ANTHONY, Esq., one of the Vice Presidents, in the chair.

"There was a fair attendance of members who took a lively interest in the business before the meeting.

"Mr. BOLL exhibited a stand of six Camellias, but owing to the want of proper accommodation, they were not seen to advantage. The Society's exertions have been much retarded by a deficient accommodation in this respect, as the room occupied at present is not adapted for the display of flowers or fruits, and a great desire is manifested to promote this feature in the weekly meetings. Mr. BOLL's Camellias were choice flowers and favorite varieties. One of them, called by him *Imbricata striata*, is a variety apparently allied to the old *Imbricata* and a well marked flower. The others were *Henri Favre*, *Imbricata*, *Sacco Nova*, *Double White Caroline Smith*, *Sulcata*, *Fimbriata*, and *Cruciata*. A seedling raised by Mr. BOLL, No. 411, was pronounced worthy of notice, and a first premium was awarded for the six blooms.

"The first premium for fruit was awarded to THOMAS DUNN, Macedon, for the best twelve Winter Apples, *Newtown Pippins*."

The following prizes are offered for the April meeting:

AURICULAS.—For the best three varieties, in pots, on the second Monday, Diploma, or \$2.

ROSES.—For the best twelve distinct varieties of Tea, Bourbon, Noisette, or Bengal, cut flowers, on the first Monday, Bronze Medal, or \$3; for the second best do. do., Diploma, or \$2. For the best six Remontants, do., Bronze Medal, or \$3; for the second best do., do., Diploma, or \$2.

PANSIES.—For the best twelve distinct varieties, cut flowers, on the second Monday, Bronze Medal, or \$3; for the second best do., do., Diploma, or \$2.

ADRIAN (MICH.) HORTICULTURAL SOCIETY.—At the annual meeting of this society, holden on Thursday evening of last week, the following officers were chosen:

President.—D. K. UNDERWOOD.

Vice President.—WM. H. SCOTT.

Secretary.—T. M. COOLEY.

Treasurer.—S. LATHROP.

Librarian.—A. S. CONNELL.

Executive Committee.—J. W. HELME, B. F. STRONG, B. W. STEER, W. OWEN, and W. H. SCOTT.

At the close of the meeting, the members present had the satisfaction of testing the merits of choice specimens of *Belmont*, *R. I. Greening*, *Herefordshire Pearmain*, *Swaar*, *Spitzenburg* and *Black apples*, presented by A. S. CORNELL.

We are glad to learn that the Society is in such a flourishing condition, and that they contemplate adding considerably to their library the present year.—*Adrian Watchtower*.

MILWAUKEE HORTICULTURAL SOCIETY.—On the 6th of March, the Milwaukee Horticultural Society held its annual meeting for the election of officers for the ensuing year:

President.—HANS CROCKER.

Vice Presidents.—CYRUS HAWLEY, CLARENCE SHEPHERD.

Corresponding Secretary.—R. N. MESSENGER.

Recording Secretary.—WM. H. WATSON.

Treasurer.—DAVID FERGUSON.

Executive Committee.—CHAS. GIFFORD, R. PARKER, and A. S. FULLER.

The Standing Committees were not appointed. We shall give them as soon as received.



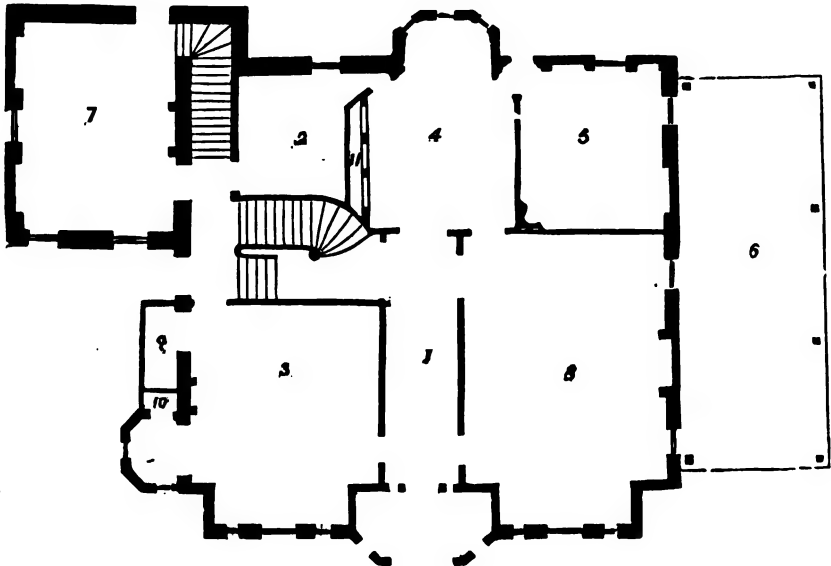
BEURRE CLAIRGEAU .

DENWOOD,

THE RESIDENCE OF JOHN JAY SMITH, ESQ., GERMANTOWN, PA., NEAR PHILADELPHIA.



FRONT ELEVATION.



PLAN OF PRINCIPAL FLOOR.

[illegible]

Root Grafting.



SEVERAL correspondents have requested our opinion concerning the respective merits of root-grafting and budding or stock-grafting, in the propagation of apple trees. A considerable degree of interest has recently been awakened on this subject, from the fact that at the late meeting of the North-Western Pomological Association, held at Dixon, Ill., it was a prominent topic of discussion, and elicited a variety of opinions and experience among the nurserymen and orchardists of the west, to which we shall presently allude. Before proceeding further, it may be well to explain precisely what we mean by root-grafting. It is a very common practice among apple tree growers, and especially when stocks are scarce, to cut the roots of seedlings into sections or pieces two or three inches in length, and graft on these; thus making three or four trees of one root. But this is an abuse of root-grafting, and should not be recommended or practiced under any circumstances, although we admit that good trees are grown in this way, of some very free, vigorous growing varieties. What we intend to speak of as root-grafting, is that in which the upper portion of a seedling root only is used, and the graft or scion inserted on the collar, or point of union between the root and stem of the plant.

In the Western States, the fresh and wonderfully fertile soil produces a rank and rapid growth of trees, and this continues unabated until a very late period of the autumn. Winter sets in upon these soft and succulent trees with the most sudden and violent changes of temperature—during the day a clear, bright sun, gives almost a summer warmth, while at night the mercury descends to zero, and even, in many cases, far below. This, it must be admitted, is a trying state of things. The upper parts of the trees seem to escape any very fatal injury, partly perhaps because they are gradually thawed by the gently rising heat of the morning, while at the surface of the ground the greatest injuries are sustained, owing perhaps to the sun striking that part from a greater altitude and from the heat reflected against it by the warmed surface of the ground. At that point, the bark is blackened and ruptured. Certain varieties are peculiarly liable to this, especially late growers. The *Roxbury Russet* and *American Golden Russet* are quoted as examples; but the *Baldwin*, *Greening*, and many others, are occasionally so affected, in proportion, probably, as the soil may be favorable, or otherwise, to the production of a late immature growth.

Now it is very evident that root-grafting is not a safe method of propagation for such varieties as are liable to these injuries in winter, but that they must be budded or grafted on stocks at such a distance from the ground as will place them beyond the reach of this influence. There can be no diversity of opinion on this point. The question of practical interest is, which are tender varieties and which are not? and this must be answered by experience. We apprehend that the soil has very much to do with this matter. It is quite possible that some of the varieties complained of as

being liable to winter-killing would entirely escape on a dry, elevated soil, where the growth would be moderate and the wood consequently well ripened. But people must take the soil as it is, and adapt their system of cultivation to its particular characteristics.

We suspect that in the West root-grafting is too often performed by using pieces instead of whole roots, and this accounts for trees—as spoken of in the Dixon Report—requiring the support of stakes for several years in the orchard. It is a fact, that trees propagated in this way do not produce a well proportioned development of roots. It is not uncommon to see such trees seven or eight feet high with only three or four prongs of roots, a few inches long, that one could hardly suppose capable of supporting such a growth of top; but trees propagated on whole roots are seldom if ever found in this condition.

As far as tardiness of bearing and unproductiveness are charged upon root-grafting, a pretty long and extensive experience compels us to regard it as an error; on the contrary, we have found that root-grafted trees, as a general thing, are, if anything, more fruitful than budded ones. It is quite common to see three or four year old root-grafted trees of certain sorts produce fruit in the nursery rows. Where in the world can more healthy and productive apple orchards be found than in Western New York, where ten years ago such a thing as budding or stock-grafting apple trees was scarcely thought of, and which to this day is practiced only on a very limited scale, for certain weak-growing sorts.

Mr. HOVER says: "We have long been convinced that it was a perfect waste of time and money to plant root-grafted trees, and were satisfied that cultivators would find it out in time. We knew it was useless to offer any advice upon the subject, as it would be considered quite gratuitous. To tell a man that a budded or grafted stock was worth double the price of a root-grafted one, would only create a laugh at our expense. We therefore thought it best to let those who estimate the value of a tree by its cheapness try the experiment fully and realize the truth of the adage, 'a fool and his money,'" &c.

Mr. HOVER has been at length induced to say this, even at the hazard of being laughed at, on account of the objection raised against root-grafting in Illinois. But will Mr. HOVER be kind enough to explain to his readers wherein the superiority of budded or stock-grafted trees lies? We are all seeking light, and it is not enough to tell us we have been fools to throw away our money on root-grafted trees, but we must be told *why*. Will he point to the orchards of Western New York, where there are the most ample illustrations of root-grafting to be found in the world, we are very sure? Will he point to the apple nurseries of Western New York, in which there are at this moment *millions* of root-grafted apple trees? He will find no proofs to suit him here. The apple nurseries and orchards of New York, root-grafted as they nearly all are, are generally regarded as equal, if not superior, to any others in this country. We think Mr. HOVER has himself spoken very favorably of the orchards of New York. At any rate we should be glad to know where there are better orchards, owing their superiority to budding or stock-grafting.

We are very confident, however, that Mr. HOVEY does not speak from experience. We once entertained opinions of root-grafting much the same as his, but it was from the want of experience, and we apprehend that some of our western friends are pronouncing too hastily, even there, where, as we have shown, serious and well founded objections to it do exist.

For the purpose of showing what opinions prevail there, we shall quote the whole discussion of the subject at Dixon, and not what one individual said, as our friend HOVEY has done:

"Swaar.—Mr. WILLIAMS—Has seen a case parallel to the one just mentioned of the *Baldwin*.

"Mr. BRAYTON—Had seen it bear well both root and stock-grafted.

"C. BRYANT—Thinks it should always be worked on very thrifty seedling stocks at standard height.

"Mr. PHOENIX—Has several root-grafted; tops appear stunted; bears well; fruit of an excellent flavor.

"A. BRYANT—Has several trees budded standard high, very productive, rather deficient in roots; has staked some trees three years; now appear firmly rooted.

"Mr. McWHORTER moved to recommend as best in quality of fruit, for limited cultivation. Lost.

"A. BRYANT moved to recommend for general culture when worked at standard height on thrifty seedling stocks. Carried unanimously.

"Mr. WILLIAMS was called on to give his views more fully on the advantages of stock-grafted or budded trees over root-grafted.

"Had paid attention to it for several years; this year had spent much time in visiting orchards and making observations. He believes that for the orchards, trees worked standard high are better worth one dollar a tree than for them to plant root-grafted trees, receiving them and a dollar with each tree as a gratuity. Has found our shy bearers, as *Early Harvest*, *Pryor's Red*, &c., to bear well when stock worked. To the rule he finds general, there may be some exceptions.

"Mr. BRAYTON—With him some varieties bear as well root-grafted as budded; some of our cultivated varieties are more hardy than the average of seedlings; such should be root-grafted.

"Mr. McWHORTER—Some varieties, that are very hardy on roots, are poor bearers.

"Mr. PHOENIX—Has paid much attention to the subject under discussion; believes that working scions from nursery trees is bad policy; attributes much of the complaining of unproductiveness to this cause; has facts to sustain him. Believes some varieties will prove quite as productive root-grafted as budded, and that some seedling stocks would produce unproductive trees. Recommended raising stocks from seed taken from productive, thrifty seedlings. Thinks it is too soon to decide entirely against root-grafting.

"Mr. AVERY—Had taken buds from nursery trees and had them bear the first year; believes if we take two five year old thrifty seedlings, graft one in the root and bud the other, the grafted one would bear as soon as the other. Believes checking the growth by budding on unthrifty seedlings causes early bearing.

"O. R. OVERMAN—Concurs in the opinion just advanced by Mr. AVERY.

"Mr. FINLEY—Attributes the tardiness of bearing in root-grafted trees to their thrifty growth; has seen blossoms on trees first year, grafted, scions from nursery trees; the young tree, however, was not healthy.

"Mr. **TOLMAN**—Knows of no objection to root-grafted trees. Could not sell budded trees in his vicinity; people object to them on account of their sprouting from the stock.

"Mr. **SHAW**—Most of those who have taken part in the discussion, admit that budded trees bear best when young; would like to know if they depart from their accustomed ways when old?

"C. R. **OVERMAN**—The only objection he knows of against budded trees, is that the stocks are frequently allowed to become too large before budding; at the point of union between the bud and stock the wood becomes defective, and the trees in consequence are short lived.

"Mr. **WILLIAMS**—We plant trees, hoping to eat fruit. I find budded trees to bear good crops six to eight years the soonest. People will soon learn that budded trees are earlier in bearing, and nurserymen will find it to their interest to raise budded trees, though it does cost more than root-grafting.

"After some desultory discussion, moved that we recommend budding or stock-grafting as preferable to root-grafting, (on sections of roots) for general use. Lost by 16 to 14. The subject being new to many, they did not consider themselves prepared to vote.

"C. R. **OVERMAN**—Would root-graft largely of some few varieties.

"On motion, adjourned to half-past one o'clock, P. M."

Now this is not a very strong expression against root-grafting even in Illinois; on the contrary, the weight of opinion is in favor of it. Mr. **PHENIX**, whom we consider one of the most observing and intelligent nurserymen in the West, thinks it too soon to decide against root-grafting, and we entirely agree with him.* Mr. C. R. **OVERMAN**, whose apple tree culture is probably the most extensive in the Union, "would graft largely of some few varieties." This is the right spirit and the right principle. *Root-grafting* is not applicable in all cases in any locality; for instance, here, such feeble growing sorts as *Porter*, *Early Joe*, *Melon*, *Red Canada*, &c., are usually budded on strong stocks that will force up a vigorous shoot the first year; but such as *Baldwin*, *Northern Spy*, *Fall Pippin*, *Greening*, *Gravenstein*, *Fameuse*, *Red Astracan*, and all those strong, rapid growing trees, succeed well grafted on roots and make large and beautiful trees for orchards at three years' growth.

Is there any argument in theory against root-grafting as a means of propagating? Any reasons, grounded upon vegetable physiology, why a sound, healthy scion, inserted on a young and healthy root, should not make a good tree? We know of none. Indeed, it is one of the most complete and rational modes of propagation that we know of, but it must be properly performed. We are very well aware that there are many very worthless root-grafted trees grown and sold, and so there are of budded ones. Every mode of propagation is abused by careless, unskilful persons; but this constitutes no argument, one way or the other.

The tree-grower has a right to study economy in the propagation of trees, as well as people in other pursuits, and root-grafting recommends itself particularly by its economy. It is, or can be, performed in the leisure of winter, and thus the nurseryman is enabled to employ his workmen, who would otherwise be idle, and he is also able to give his attention to the propagation of other trees in the budding season.

* Since this was written, we have received a communication on this subject from Mr. **PHENIX**, which will be published in our next number.

It is a system peculiarly adapted to this country, where trees must be grown cheap and on a very extensive scale.

Top-grafting, in the propagation of young trees, is generally avoided by all good practical nurserymen, and for good and sufficient reasons. It very often happens that there is an inequality of growth between the stock and graft that becomes at once unsightly and injurious to the prosperity of the tree. Besides, it often provokes unnatural precocity that hastens the tree to a premature death. In certain cases, however, it becomes necessary, as in a climate like that of the West, with certain varieties, as in the case of very slender and straggling growers, of pendulous varieties, &c. Aside from such exceptions, it may be regarded as an axiom in propagation, that *the earlier and the nearer to the root* the union is formed between the stock and graft, the more perfect the union will be and the more healthy and durable the tree.

Budding is, of all other modes, the most extensively practiced, if we except the propagation of American apple trees. It is a complete and beautiful system when well done; but, unless in such cases as we have excepted for grafting, it should be done as near the ground as possible. The younger and more vigorous the stocks be, the more desirable will be the tree. Much depends upon the selection of scions, and we fear that some of the worst results we hear of in the West arise from using pithy, ill-matured scions. We have just received a parcel of scions from Illinois, of four or five different varieties, and we find them so spongy and pithy that we should never use them with a view to obtain sound, hardy trees. Even the base of the shoots are unfit for use, and we suspect that a very large number of the scions used in the West are of a similar character. It may be well for Western tree growers to look into this, and it deserves consideration everywhere.

DENWOOD,*

THE RESIDENCE OF JOHN JAY SMITH, ESQ., GERMANTOWN, PA., NEAR PHILADELPHIA.

THE private residence of which we give a drawing in the present number, presents some peculiarities of construction and interior division, which we have thought might prove a useful study to those who are about to build.

It is a complete *rus in urbe*; the kitchen being *in* the village, and the opposite or piazza side, facing the northeast, for summer afternoon shade, overlooks the country, with a fine belt of trees within a suitable distance. The amount of ground attached is two acres, but we observed that it is filled with the most valuable hardy trees and shrubs, imported and domestic. Among the former will be found a fine collection of Hollies and Rhododendrons—two important but much neglected families of plants.

The first thing that strikes the eye in looking at this house, is the circular hoods in the attic story—a contrivance which gives height to a considerable portion of the rooms, and has externally a good effect. The attics are in fact as good rooms as need

* See Frontispiece. EXPLANATION.—1, Entrance Hall. 2, Butler's Pantry. 3, Dining-Room. 4, Library. 5, Private Office. 6, Piazza. 7, Kitchen, with summer do. attached. 8, Drawing-Room. 9, Pantry. 10, Closet.

be asked — superior to any we have seen in dwellings of the same elevation. A front portico, and two projecting bay windows, make not only a cheerful entrance, but add materially to the size of the drawing and dining rooms. The portico, as well as the interior hall, are paved with tessellated tiles, made by MINTON & Co., Stoke-upon-Trent, England, which are now becoming so much appreciated, and which can not be too much known.

The interior of the house is divided in a different manner from most dwellings, as will be seen by a glance at the ground plan. The hall is carried only to the depth of the drawing room, where by an ornamental ground glass door it opens upon a neat library having a bay window slightly enriched at the top with colored glass; so that the view through the library door and the bay window beyond, produces an effect like that of an oratory. The book-cases on one side are recessed into the butler's pantry, so as to occupy no space from the room. The two doors in the octagon corners are filled with book backs, bound on blocks to form a perfect representation, and to furnish the room — a plan much practiced in Europe. These doors open respectively into the butler's pantry and the private office beyond the drawing-room. Three good and useful rooms are thus obtained. The pantry is a low story; above it is the bath-room, &c.; and above that a convenient chamber; making three stories in the part of the house nearest the kitchen. The dining-room, on the left of the hall, enlarged by the front projecting window and a handsome bay window at the side, is large and convenient. Behind the fire-place are closets beyond the walls of the house, and entered respectively from the side bay window and the dining-room. They are of a comfortable temperature in the coldest weather, being behind the chimney. The staircase has been thrown out of sight in the passage from the hall to the kitchen, and being uninclosed has a light and airy appearance.

The whole house is tempered by a furnace, made to warm all the rooms if required, as well as the hall. In every way advantage has been of space, which is saved wherever it was possible. As examples, we noted that under the chamber windows drawers are let into the stone walls, for shoes, &c.; in the library is a concealed umbrella closet; and between the book-cases a long closet in the pilaster, for drawings, or spy-glasses, &c. Both hydrant and rain water are plentifully supplied to the house and grounds, in which are also two pumps, a gardener's lodge, convenient stables and coach-house, &c., &c.

The spot on which this house is erected was two years ago a stable-yard. The visitor will be struck with the transformation that has been already effected. When Mr. SMITH's numerous fruit and ornamental trees have had a few year's more growth, we hope to visit it again, and have no doubt of being able to call it one of the handsomest and most convenient places in Pennsylvania, where, by the way, much good taste is growing apparent.

The house was designed by an English architect to combine all the comforts collected in a compass of 42 by 36 feet; the design was carried out and improved by THOMAS U. WALTER, Esq., the architect of Girard College, and now superintendent of the Capitol extension at Washington.

ANNUALS, AND THEIR CULTIVATION.*

CALANDRINIA.—The ornamental species belonging to the genus *Calandrinia* are mostly natives of South America, and like the Mignonette are shrubby plants there, though with us, and also in Europe, they are treated as annuals. The name *Calandrinia* was given to this genus in honor of L. CALANDRINI, an Italian botanist. Few flowers have a more striking effect than the little *Calandrinia speciosa*, (of which the accompanying engraving is a very good representation,) with its brilliant dark crimson flowers peeping out from its thick and beautiful bed of leaves. The flowers open in the morning, and present as rich a mass of foliage and flowers as can be desired; but by three o'clock in the afternoon every little flower is closed. With the exception of the early closing of the petals, this species deserves to be generally cultivated, as nothing can exceed the rich velvety look of the flowers. It is quite hardy, a true annual, and ripens its seeds in great abundance. It is a native of Northern California, whence its seeds were sent to England in 1832, by DOUGLAS. It should be sown in dry and exposed situations, where it can have abundance of light and heat; as the situation in which DOUGLAS found it was a hot, dry bank. It requires very little water, and flourishes best in weather when most other plants are burnt up. It is well adapted for rock-work. It may be sown two or three times during the season, and at any time from April to July.



CALANDRINIA SPECIOSA.

THE MALOPE GRANDIFLORA, or large-flowered Malope, a correct drawing of which we give, taken from our growth of last season, is really one of the most showy annuals

* Continued from April number.

**MALOPE GRANDIFLORA.****NEMOPHILA MACULATA.**

that adorn our garden. The plant grows from three to four feet high, and a bed covered with its blossoms and no less beautiful buds is an object of no ordinary beauty. It belongs to the *Malvaceæ* family, several members of which are to be found in our fields and road-sides.

NEMOPHILA MACULATA.—This beautiful little plant is a native of California, where it was discovered by Mr. HARTWEG, during his mission in search of new plants for the London Horticultural Society. The plant is of a procumbent habit, like that of *N. insignis*, and the whole plant is clothed with short spreading hairs. The flowers grow from the axils singly, on stalks longer than the leaves, and are the size of the drawing, whitish in their ground color, and each lobe of the corolla tipped with a large deep-violet blotch, which, when perfect, gives the flower a showy and rather peculiar appearance. It blossoms freely, and is in every way worthy of cultivation.

This plant prospers best in a rather shady situation, as they sometimes die when exposed to a hot sun on a dry soil, in consequence of the drying of the slender collar; though *N. maculata* is not as liable to receive injury in this way as *N. insignis*. It is well to make sowings several times during the season.

THE ROCKET LARKSPUR—*Delphinium ajacis*.—The Rocket Larkspur was introduced into England, from Switzerland, in 1573, although not supposed to be a native of that country. It is of a compact habit of growth, and its blossoms appear set around the raceme, forming a dense mass of blossom; and its beauty has made it a great favorite for more than two hundred and fifty years.

It requires a rich soil to bring it to perfection, and an addition of leaf mold from the woods will tell a good story when the plants are in bloom. There are few plants that will better reward good culture. The seed should be sown in drills, where the plants are intended to blossom, as they will not bear transplanting. When the young plants come up, they will require but little thinning, and may be left

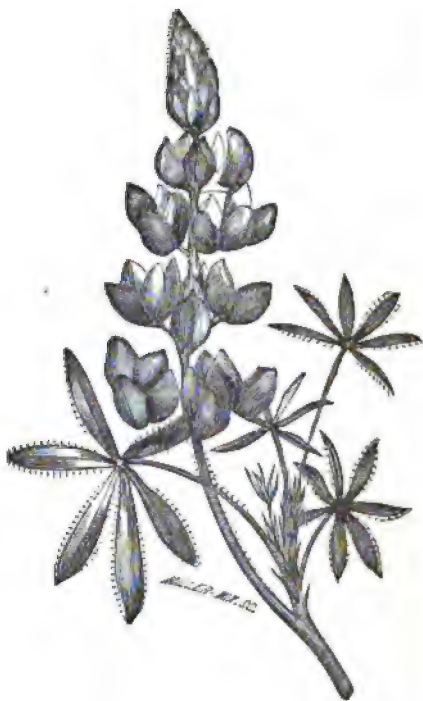


ROCKET LARKSPUR.

standing within two inches of each other; as from their compact habit they require but little room, and should be seen in masses to produce a fine effect. These plants are of such a neat and symmetrical growth, that any device, such as a name, can be well made with them. The time for sowing is in April.

THE DWARF LUPIN—*Lupinus nanus*.—

The Dwarf Lupin is a very pretty plant, with blue or purple flowers, intermingled with a tint of rose-color and white. Its leaves are cut so as to resemble expanded fingers. It is about a foot in height, and bears long spikes of flowers, as seen in the engraving. The blossoms are of long duration, and this, with its compact habit of growth, makes it a fine plant for masses. The seed should be planted where the flowers are to remain. It is a native of California, and was discovered by DOUGLAS in 1834.



DWARF LUPIN.



PETUNIA PUNCTATA.

THE PETUNIA.—The White Petunia (*P. nyctagini-flora*) is a native of South America, near the mouth of the Rio de la Plata, where it was discovered in 1823. The Purple Petunia (*P. violacea*) was discovered in 1830, growing on the banks of the river Uruguay, Buenos Ayres. As both these plants were readily propagated, both by cuttings and seeds, they soon spread over Europe and America, and now make one of the chief ornaments in all gardens. By hybridization, care in the selection of seeds from the best plants, and general good culture, an innumerable number of good plants have been raised far superior in size and beauty to the original. When a flower of particular merit is obtained, it is propagated by cuttings, and soon disseminated. Those

who grow them as annuals in the open ground, should be careful to save seed from

only the best flowers, and it is well to remove all poor flowers from the bed. Among the best *Petunias* is the one we figure in this article, *Petunia punctata*, as it is of fair form, and of a remarkable color, approaching to blue, with a sort of variegated stripe of white, which forms a pretty contrast with the ground color.

THE BEURRE CLAIRGEAU PEAR.

THIS is a new French variety, originated by M. CLAIRGEAU, of Nantes, and sent out from the French nurseries in 1848 or '49, we believe. It is a very large fruit, and so far as it has been tested both in Massachusetts and New York, gives promise of being a valuable acquisition. Col. WILDER sent us the following description among his notices of new pears that promise well, but we delayed its publication in order to accompany it with a colored drawing.*

"Size—extra large. Form—oblong, ovate pyriform, outline a little irregular. Stem—short and stout, set obliquely and without much depression. Calyx—open, segments short, moderately sunk. Color—brownish green, coarsely clotted and almost entirely covered with russet, sometimes intermixed with dull red on the sunny side. Flesh—melting and juicy, with an agreeable sub-acid flavor, resembling the *Baronne de Mello*, but with more aroma. Class—good; will probably prove *very good*.

"The *Beurré Clairgeau* has fruited in several gardens in the vicinity of Boston and New York, and promises to be a great acquisition. The tree is a strong, thrifty grower, either on the Pear or Quince root, and comes early into bearing, many trees which were grafted in the spring of 1851 being now full of fruit buds."

Mr. CABOT, President of the Massachusetts Horticultural Society, speaks of it as follows, in *Hovey's Magazine* of March last :

"So far as an opinion, formed by testing one or two specimens and those from imported trees of the first year of bearing, is justifiable, this Pear promises to be, on account of its size, beauty, and quality, a highly valuable acquisition. It is a new Pear, raised from seed by M. CLAIRGEAU, at Nantes, of a yellow russet color, with darker russet specks, and a little red in the sun; very large, with a short, very thick stem; calyx small and open; flesh yellowish white, tender, half melting, of a very pleasant sub-acid flavor, ripening last of October and November; tree a strong grower, wood stout, and appears to come early into bearing."

It was figured and described by Mr. LE ROY, of Angers, in Vol. 6 of this journal. The specimen from which our drawing is taken, was grown by us last season.

* See Frontispiece.



TREES SUITED TO GROUNDS OF ONE TO THREE ACRES.

BY B. LONGMEADOW, MASS.

IN the February number of the *Horticulturist*, page 62, I read with pleasure your remarks on the *fitness* and *variety* of trees,—that their size should be so proportioned to the size of the lawn as to admit of a variety of trees of different foliage, shape, and flowers. But you go on to remark that there should be a contrast between the style of the house and the trees surrounding it: *i. e.*, an Italian house, with its graceful lines, should be surrounded with picturesque spiry-topped trees; and the gothic house, with its picturesque gables, contrasted with round-headed, graceful trees. In this you take issue with DOWNING, who writes very eloquently, and, I think, satisfactorily, on the subject, and gives two illustrations on page 55 of his *Landscape Gardening*.*

A *Virgilia lutea* which five years ago I turned out of a flower-pot into my lawn, and which was then less than a foot high, has now become a fine, flourishing tree of from nine to ten feet high, and I am expecting soon to see it blossom. A Ginko tree near it, though much larger when transplanted, has grown with much less rapidity and inclines decidedly to the picturesque. A Kentucky Coffee tree, ten feet high, transplanted at the same time, has grown but little, owing to the soil, I presume, (a sandy loam,) it requiring a deep, heavy soil.

The following trees are well suited to small grounds of from one to three acres. Many of them admit of being very closely grouped, for the picturesque school, and most of them form graceful trees when allowed to grow singly. All are easily procured of good size, either from the nursery or woods, and that they are all hardy in Massachusetts, at least in the southern part and away from the sea shore, I know from experience:

Medium sized trees.—European Mountain Ash, Catalpa, Umbrella Magnolia, Judas Tree, Scotch Laburnum, Purple-leaved Beech, Japan Ginko, Double-Flowering Cherry, (two varieties,) Osage Orange, Box Wood, and Sour Gum or Peperidge. The two last are natives of our woods.

Pruned and trained as small trees.—The Hawthorne, (three varieties,) Buckthorn, Privet, White Lilac, Purple Fringe, Sassafra, and Moose Wood or Striped-bark Maple, are very ornamental. The two last are natives; the Privet is also occasionally found growing in the woods.

These, with a few shrubs,—the Carolina Large-Flowering Syringa, Common Fragrant Syringa, Persian Lilacs, (purple, white, and cut-leaved,) Tartarian Tree Honeysuckle, White-Flowering Honeysuckle, Purple Fringe Tree, Privet, Dwarf White Horse Chestnut, Indian Currant, (red fruit,) Snow Berry, (white fruited,) Bloody-twigged Dogwood, Japan Quince, (scarlet and white,) Spiræa (half dozen varieties).

* Our suggestion corresponds with the teachings of Mr. DOWNING, see pages 109 and 110 of the work you refer to. The same principle is taught by every good landscape gardener and landscape painter. Horizontal lines and flat roofs make a better picture when relieved by erect, conical or round-headed trees. We shall soon offer some illustrations on this head.—Ed.

And with the following evergreen trees and shrubs—Hemlock, the finest of native Evergreens and the best for grouping; Norway Spruce, equal to the Hemlock, but as it grows large must be used sparingly, and looks best standing by itself on the lawn; Black or Double Spruce; Arbor Vitæ; Red Cedar; Virginia Red Cedar; Sweedish Juniper; American Holly; Common Laurel; American Rhododendron (*Rhododendron maximum*); and Mahonia or Holly-leaved Berberry, grouped on the lawn, and bordering the entrance road and walks, a small place may be made very attractive, and, as you remark, page 62, a better effect produced than by the use of a few large trees like the Elm.

I would add to the above, two deciduous trees, the European Larch and the Virginia Cypress, which, in summer, have the appearance of evergreens.

HARDY TREES AND SHRUBS—PLANTING AND ARRANGEMENT.

BY WM. W. VALK, M. D., FLUSHING.

As in the animal kingdom man holds the first rank in regard to external circumstances, so do trees and shrubs hold precisely the same rank in the kingdom of vegetable nature. In their structure they are alike superior, in their form more symmetrical, and in their duration far less evanescent. To their nourishment, also, their more volatile allies contribute by their death, since they feed and nourish upon (as it were) the gases generated from their remains.

It need not, and does not, then, surprise us, that their skilful and judicious cultivation has come to be regarded as the noblest occupation of the horticulturist; or that a fine specimen of a rare exotic species should be looked upon with the proudest and most pleasurable emotions. In the human mind there is a natural impressibility with the grand and beautiful; and, as has been truly said—

“Than a tree, a grander child earth bears not.”

But the appearance of these monarchs of vegetation is most powerfully affected by locality and difference of treatment; and our present object is to institute a comparison between the method of growing them in what are termed *arboretums*, and that of planting them singly or in groups, without any regard to botanical order or affinity, in conspicuous parts of the pleasure grounds of suburban and country residences. There is undoubtedly merit attached to each of these systems; therefore it is proper we should examine the claims of each, and endeavor to show which is the most ornamental and appropriate.

What is an arboretum?—Considered vaguely it is simply a collection of indigenous and exotic trees, disposed according to the proprietor's taste, and congregated upon a small superficies of ground, or scattered over an estate of twenty or thirty acres. This acceptance of the term is not, however, the general one. In all modern arboretums, every genus or tribe of plants is grouped together more or less densely, and

the whole collection arranged with order and regularity; so that the connecting link of natural affinity may be at once discovered between immediate neighbors. In very large estates, or in botanical or other public gardens, these departments create a variation, and this is frequently a very pleasing one. They also furnish the beholder, at one glance, with a knowledge of the hardy ligneous species of every genus, tribe, or order of plants, and the position they occupy in the natural system of botany.

Arboretums are thus of great advantage to the scientific student, or to any one really desirous of acquiring a thorough knowledge of the aspect, habits, varieties, and affinities of arboreous plants. By this arrangement, too, a more specific and discriminate cultivation can be afforded, with greater certainty and convenience. Nor is there any other mode whereby a *complete* assortment may be conserved, which is desirable in many respects. Yet, when we have said this, there remains nothing more to be said in their favor. For they are entirely incompatible with beauty, with ornament, and with the proper development or exhibition of the character of a plant. Indeed, they are nothing more than living descriptive catalogues, experimental and observative departments—and not at all to be thought of for *limited* pleasure grounds, whether public or private.

Now, if it be desirable to exhibit the charms and beauties of vegetation, we must avoid arranging plants of any description according to affinity, or their position in any system of classification; for in landscape gardening there are two extremes to be deprecated—dull monotony, and a slovenly, displeasing irregularity. This may seem rather paradoxical, but it is nevertheless true. Local uniformity differs widely from a comprehensive unity, and is confined to the particular beds or plots occupied by the species of certain genera or tribes. These frequently assimilate so closely in appearance, that in one place a bed of trees will be seen all evergreen; close by, a cluster of dwarf shrubs, all flowering at the same time; and equally near, in another direction, a group of the largest deciduous trees. In themselves all these are monotonous and present a total lack of congruity, if viewed in connection and comparison with each other.

Nothing then can be more adverse to the genuine principles of landscape disposition, than the system above described. There must be diversity of outline, form, color, season, and the duration of foliage and flowers, as absolute essentials to the beauty of any scenery. Without them it appears dull, formal and constrained; in fact, *unnatural*: and much as theorists may affect to despise imitating Nature, it is after all the correct system, and the only successful one.

But we are to remember that a garden is the medium which associates natural with artificial objects—the mansion with the surrounding country. Its arrangement and appearance should therefore be in precise accordance with this design. To plant trees, then, *en masse*, or even in arboretums, without regard to size, appearance, or their general character, is not only inadmissible, but intolerable, where all is required to be conformable and harmonious.

In planting ornamental trees and shrubs, (and no others should be allowed a place in the pleasure garden,) they should be so arranged as to stand quite distinct from

each other, so that each one may be witnessed and examined separately, without suffering any detracton from its entire exposure. They must also be so blended, associated, and intermingled, that a distant view may present the appearance of an agreeable and diversified mass of verdure. These two objects apparently so remote, may nevertheless be concurrently accomplished. In shrubberies or parterres, whether large or small, a due regard to the known character or habits of the plants selected, will enable the gardener (if sufficiently intelligent) to place them at such distances as will allow room for their full and complete extension, without becoming entangled with other plants. Again: If the plot of ground be small, or the diminutive size of the plants oppose this arrangement at first, they may be so planted as to admit of any *subsequent* thinning to the required extent, without in the least detracting from the general appearance of the group. Judgment and taste will overcome obstacles, and sooner or later there will appear a harmonious development.

The shrubbery thus planted with exotic trees, would in itself be an *arboretum*; and if that charming *variety* be consulted which can alone please the eye, none of the objections against those departments would in such a case apply. Species and genera would certainly be separated and scattered about, and their associations lost; but then, *pleasure gardens* are not botanical nurseries; and we are of an opinion, that few, if any, proprietors would follow out any such idea, at the expense of everything that renders them picturesque and attractive. If information be desired, that can be readily obtained from books; and the attempt to illustrate it, or to facilitate its acquirement by the disposing of plants according to any other system than that dictated by taste, sense, and nature, is neither more nor less than an outrage on all the principles of beauty, and a thorough perversion of the science of landscape gardening.

In planting trees and shrubs, no method is so well calculated to display the perfection of their character, as that of singly placing them in conspicuous situations in the center of small parterres, or on lawns. It is, however, rather unfortunate, that this system must be *limited* to certain portions of the pleasure ground; for if carried to too great an extent, its effect would not be pleasing. For this purpose, then, we are to select the most rare, beautiful, and symmetrical kinds. We have thus the advantage of examining the plants on every side. Being perfectly isolated, air and light are freely admitted to all their surface, and from the operation of these agents, they alone can attain that graceful symmetry of form which all plants should exhibit in such situations.

We have thus given *our* opinion of the different modes of planting and arranging ornamental hardy shrubs and trees. The subject admits of a much greater scope of language and development of detail than is here presented to the reader, yet enough is said to give a right direction to the thoughts of the inexperienced, and to lead them, as we think, properly, in the laying out of their pleasure grounds. In very extensive domains, there is no doubt that arboretums may in some degree be rendered ornamental, but the extension of the system is by no means to be desired, for it is not only defective in principle, but in practice these defects are glaringly manifest.

Let every man, then, who loves his garden and his pleasure grounds, and who seeks to embellish and adorn them—who would heighten rather than mar their natural beauties, and steer with precision between the rules of art and nature, avoiding the defects of either, yet rising superior to both, let him so plant his trees and shrubs as to present individually and collectively the greatest diversity, combined with the most delightful and harmonious arrangement.

ASIATIC CONIFERS.*

BY JOHN SAUL, WASHINGTON, D. C.

CALIFORNIA gives us very beautiful evergreens, and among its conifers some of the loftiest trees in the world; but the Himalayan mountains give a still more decided character to many of the trees and shrubs which it produces. These lofty mountains, whose sides are clothed with the richest vegetation, appear to impart a portion of their own gigantic stature to the trees and shrubs which they produce;—the Rhododendrons attain the height of trees; the Holly (*Ilex latifolia*) also grows high, having foliage as large as *Magnolia grandiflora*; the Spruce (*Abies morinda*) has longer and more graceful foliage or branches than its congeners in Europe or this country. How long, broad, and beautiful, is the foliage of the Silver Firs (*Picea Webbiana* and *pindrow*) compared to Balm of Gilead, or even the beautiful Silver Fir of Europe, and what a much greater height they attain. I might also point to the Cedars, and other trees, but these few are sufficient to show the marked character of Himalayan vegetation. The following list is not intended to include all, but I think among them will be found all or nearly all the principal species most worthy of general cultivation:

JUNIPERUS RECURVA—*The Weeping Nepal Juniper*.—This very beautiful weeping evergreen shrub has a character decided and peculiar to itself, and among a collection of evergreens it never fails to catch the eye of the most careless observer; and how can it be otherwise, if we picture to ourselves a shrub eight or ten feet high, (a very common height now in England,) thickly set with branches all round, and every one, from its summit to its base, pointing to the ground, the lower branches resting on the ground. It is a more decided weeper than the Weeping Willow, our old favorite; and when its evergreen character is added to this, how much is its beauty enhanced. In summer it assumes a beautiful vivid green, bearing a profusion of berries about the size of peas, which ripen in the fall, and which add much to the beauty and interest of the plant. Native country, Alps of Nepal and Cashmere.

JUNIPERUS SQUAMATA.—A low, trailing bush, of distinct habits, retaining its beautiful green appearance through the winter and spring months. Our native trailing Juniper assumes in winter that unpleasant appearance I have already noticed. It is perfectly hardy in the Middle States, which need not surprize us when we consider that it comes from the Alps of Bootan and Nepal, at the elevation of 11,500 feet.

JUNIPERUS CHINENSIS—*The Chinese Juniper*—is a very beautiful shrub. In color

it resembles the Swedish, having however the green a little more vivid. It is not of so upright a growth as the Swedish, but more inclined to branch out, forming a magnificent bush, and retains its color well through winter. Native of China and Japan.

JUNIPERUS SPHERICA.—A recent importation from the north of China, where it was discovered by Mr. FORTUNE, and sent to Messrs. STANDISH & NOBLE. According to Mr. FORTUNE it forms a tree 30 to 50 feet in height. Dr. LINDLEY says: * “The species differs from *J. Chinensis* apparently, in not having any acicular leaves, and very decidedly in the size and form of its fruit, which is twice as large as in that species, and not at all depressed at the end, but very regularly spherical.” There is little doubt but this tree is hardy.

JUNIPERUS EXCELSA.—Were I to select two of the most distinct and beautiful of all the Junipers now in cultivation, I would take the first named—*recurva*—and the present subject. This is quite as distinct and as beautiful as that, though they are the very antipodes of each other—that is gracefully weeping, this is remarkably erect in its growth—that is of a deep green, this is very glaucous; and in nearly every point they are dissimilar. This forms a beautiful erect tree with a silvery, feathery, graceful appearance; the contrast with other conifers is remarkable and fine. Native of the Western Himalayas.

BIOTA ORIENTALIS; *syn. THUYA ORIENTALIS*.—*The Chinese Arbor Vitæ*.—This beautiful evergreen is well known in both hemispheres, and where it succeeds well few trees are more beautifully symmetrical. In color it is a beautiful green, and in this quality much superior to our native *Arbor Vitæ*. This color, in general, it retains until the beginning of winter, from which time up to the commencement of growth it assumes the unpleasant rusty brown appearance. In Britain it forms a much more beautiful and compact tree than in this country, and is very extensively planted, though in the neighborhood whence I write are some very fair specimens, much better than further north where it does not appear to be quite at home. Climate has, no doubt, much, if not all, to do with this. Our native *Arbor Vitæ* (*Thuya occidentalis*) forms a very ragged poor tree in England, while on some parts of the European continent it proves as beautiful as on the Highlands of the Hudson. To what can we attribute this but to climate? and if climate affects the one species, it is likely to affect the other. The severe winters of the Northern States do not appear to agree with it; still, from its beauty, it deserves to be extensively planted. It forms a large tree in its native countries, China and Japan.

BIOTA TARTARICA; *syn. THUYA TARTARICA*.—*Tartarian*, and sometimes called in the nurseries the *Siberian Arbor Vitæ*.—About four years since I visited a gentleman in the west of England who had a very beautiful collection of conifers, comprising most of the rare and valuable Cedars, Pines, Cypressess, &c., many of which had attained a fair size, and some truly lovely. After minutely surveying and scrutinizing all, we came to the gem of the collection. What was it? Had I ever seen it before? How lovely! How beautiful! Is it possible it is the Tartarian or Siberian *Arbor Vitæ* of the nurseries? Yet such it was. Though I had grown thousands of this in the

nurseries, I had never seen so large or beautiful a specimen before. It was a tree some thirty feet in height, feathered to the ground; at its base it is broader than the other Arbor Vitæ. This, I should suppose, would have a diameter of from fifteen to twenty feet, gradually tapering to the point—very symmetrical, yet not showing a stiff outline like the Chinese, but filling beautifully up with its graceful feathery branches. In color it is not as good as the Chinese, yet better than our native plant. This I consider the most beautiful of all the Arbor Vitæ, and very hardy, and whoever plants evergreens should not overlook this. Native countries, north of Asia and Nepal.

BIOTA STRICTA; syn. THUYA STRICTA.—There appears to be some confusion regarding this plant. The true species appears to be something in the way of the preceding, but, as the name implies, more strict in its growth. An erect growing variety of the Chinese is sometimes sold for this plant. A tall tree from north of Asia.

BIOTA PENDULA; syn. THUYA PENDULA—Weeping Arbor Vitæ.—This very singular and distinct plant is so very dissimilar to the other species of the genus, that we need not be surprised when we hear people assert—and some do—that this is a cross between a Juniper and Arbor Vitæ; yet a close inspection by any one acquainted with the genus will soon convince him it is a true species. It is a straggling weeping bush, having long flexible shoots, in the way of some of the Australian Casaurinas. This plant grows freely when grafted on any of the other Arbor Vitæ. Standard high it forms a singular weeping plant, though I cannot say a strikingly beautiful one. Native of Northern Asia.

CUPRESSUS TORULOSA—Himalayan Cypress.—Thousands of seedlings of this tree have been raised in the principal English nurseries of late years. It is a very rapid growing tree, and evidently a very beautiful one. There are several varieties, some of which rather tender, and will not stand many degrees of frost, while others are pretty hardy; the variety *elegantissima* is as hardy as any that I know. As this plant grows rapidly and late in the fall in England, its shoots being young and sappy are frequently cut back by frost. In this country where the wood would be well ripened it will stand several degrees more cold. Should, however, the winters of the Middle States be too severe, it will grow admirably in the States a little more south, and from its extreme beauty it should be liberally planted. Writing of this tree Dr. LINDLEY says: “It would seem that there is but one species of Cypress inhabiting the north of India, and that the *Cupressus torulosa*—why so called we cannot discover. For the native country of this plant Bhotan was first given by the late Prof. DOX, upon the authority of Mr. WEBB. Afterwards, Dr. ROYLE stated that it appeared to be the plant called *Theelo* by the natives, seen between Simla and Phagoo, and near Jangkee Ke Ghat, a high hill to the southward of Rol. It is also found in Kemaen, near Neetee, Simla, and in Kunawur.” ENDLICHER says that it occurs in Butan and Nepal as high as 8500 feet of elevation. Dr. WALLICH adds the southern mountains of Oude. Is it really true that there is but one Indian Cypress, and that the *torulosa*? And is the *torulosa* what is spoken of by all these writers? We doubt it much. In the first place, *Cupr. horizontalis* occurs in Persia; why not in India? In the next

place, there are such differences among the specimens of Indian Cypresses raised in England, and between them and the wild specimens, as to suggest reasonable doubts concerning their identity. As far as we can investigate the matter, Indian evidence seems to fail us, and home evidence is conclusive. All that can be affirmed with confidence is, that in this country, raised from Himalayan seeds, exists a glaucous, upright, graceful Cypress, which is distinct from all European kinds, and to which the name of *torulosa* is applied. It has a perfectly straight stem, and when young, a compact, conical growth, by which it is known at first sight. It attains a large size, and is a fine tree. Native of Bootan and Nepal.

CUPRESSUS GLAUCA; syn. LUSITANICA.—*The Cedar of Goa*.—This extremely graceful and beautiful plant will succeed in the open borders only in the very mildest parts of Britain. In that country it is frequently cultivated in green-houses and conservatories for the grace and beauty it throws in among a collection of plants. In this way only can it be cultivated in the Middle and Northern States; but as a plant for the Southern States few have greater claims upon the planter, from its elegance, grace and beauty. It is a fine tree, of large size, near Goa, in Hindostan.

CUPRESSUS FUNEBRIS.—On the introduction of this tree from China by Mr. Fortune, it was spoken of by some of the first writers of the day as one of the most beautiful evergreen trees ever introduced. Has it proved to be so? So far I think it has, as few evergreen trees have promised better. It is free and thrifty in its growth, even in its young state is very beautiful, and judging from the little experience had of it, it will prove hardy in the Middle States. Its discoverer, Mr. Fortune, thus writes of it: "The most beautiful tree found in this district is a species of Weeping Cypress, which I had never met with in any other part of China, and which was quite new to me. It was during one of my daily rambles that I saw the first specimen. About half a mile distant from where I was, I observed a noble looking fir-tree, about sixty feet in height, having a stem as straight as the Norfolk Island Pine, and weeping branches like the Willow of St. Helena. Its branches grew at first at right angles to the main stem, then described a graceful curve upward, and bent again at their points. From these main branches others long and slender hung down perpendicularly, and gave the whole tree a weeping and graceful form. It reminded me of some of those large and gorgeous chandeliers, sometimes seen in theatres and public halls in Europe." Dr. LINDLEY says of it: "This is probably the most interesting coniferous plant yet in cultivation, and must in time displace the Weeping Willow. It is perfectly hardy, as was indicated by its native country. A figure is given in Lord MACARTNEY'S Embassy to China, where it forms a weeping tree in the foreground of the view of the 'Vale of Tombs,' a place situated in the inclement climate of Zhe-hol. The rude representation of it on Chinese porcelain, having been copied by our manufacturers, have given rise to the 'willow pattern' found in one of the commonest kinds of English table ware." Native of the Northern Provinces of China.

CUPRESSUS SEMPERVIRENS.—This the well known Cypress of Southern Europe and the Levant, used principally in those countries for planting cemeteries and grave yards.

The Turks in a special manner plant almost exclusively their cemeteries with this tree, and perhaps for this purpose it has no superior in the world in mild climates. It is very erect and spiral in its growth, and it looks as if nature intended it to grow at the last resting place of man. Unfortunately with us this tree is too delicate for the Middle States, and we can never hope to see it grow north of South Carolina.

(To be continued.)

STRAWBERRIES.*

BY WM. R. PRINCE, FLUSHING, N. Y.

80. *Abyssinian Prince*.—One of Dr. Brinckle's seedlings, of medium size, conical form, and dark crimson color, productive. P.

81. *Methven Scarlet, or Victoria*.—Very large, roundish depressed, dark scarlet, showy, coarse, very productive, profitable for market. P.

82. *Hudson*.—This ancient and very distinct variety is identical with the "*Hudson of Cincinnati*." The fruit is of large size, pointed conical form, dark scarlet or crimson when fully ripe, and is then of excellent flavor. The berries redden some days before maturity, and are in consequence often plucked prematurely, and the fruit from this circumstance has been deemed inferior in sweetness and quality. The berries have the peculiarity of remaining green at the extreme point until they attain perfect maturity, when that becomes red also. This is one of the few varieties of which we possess plants of both sexes, and they have been grown jointly at these nurseries for more than forty years. It appears that at Philadelphia they possessed only the *pistillate* variety, and that it alone was transmitted to Cincinnati many years since, which serves to account for all the Ohio plants being of that sex. It is highly productive, and perhaps none other will yield a larger crop, but it is indispensable that its own male, or some other, should be connected as fertilizer. It is entirely distinct from the "*Hudson's Bay*," of the London Horticultural Society, which is one of the *Scarlets*, whereas this is of the *Pine* family. In my investigations I have found it to be identical with a variety called "*Mulberry*," and it may be identical with the variety so named in the Catalogue of the London Horticultural Society. About thirty-five years ago it was generally called "*Red Chili*," and I think it was imported from England by my father, the late WM. PRINCE, under that name, but he finding it distinct from the *Chili* family, changed that name to the present one. H and P.

83. *Burr's New Pine*.—Medium size, light scarlet, handsome, high, spicy flavor, not a full bearer, and the plant less vigorous than many other varieties. P.

84. *Burr's Scarlet Melting*.—Rather large, rounded or short cone, scarlet, showy, moderate flavor, rather soft for market, ripens early, very productive, the most valuable of BURR's varieties. P.

* Continued from the April number.

35. *Rival Hudson (Burr's)*.—Rather large, conical, dark scarlet, showy, medium quality, acid, good for preserves, very productive. P.

36. *Columbus (Burr's)*.—Large, dark scarlet, inferior flavor, very productive. P. The four preceding varieties were originated by Mr. JOHN BURR, of Columbus, Ohio.

*37. *Serena*.—Rather large, light scarlet, fine flavor, productive.

38. *Iowa*.—Large, broad rounded, light orange scarlet, peculiar color, beautiful, early, productive, inferior flavor, but merits culture for its other qualities. It is one of a distinct family or species, natives of our western prairies.

39. *Jenney's Seedling*.—Large, rounded or obovate, crimson, too acid until fully ripe, then of good flavor, very productive. It has been much overrated, when there are so many others preferable to it. P.

40. *Lizzie Randolph*.—A seedling originated by Dr. BRINCKLE, of Philadelphia: the fruit round, averaging larger than *Hovey's Seedling*, but inferior to that in flavor, very productive, a showy fruit of little value. P.

41. *Genesee*.—Rather large, with a neck, bright crimson, showy, moderate flavor, fruit on long stems, productive, growth vigorous.

42. *Monroe Scarlet*.—Large, roundish, light scarlet, good flavor, very productive, estimable. P.

43. *Climax Scarlet*.—Medium size, conical, light scarlet, good flavor, rather acid. P.

44. *Orange Prolific*.—Large, rounded, orange, scarlet, rather acid, very productive, late. P.

45. *Scarlet Cone*.—Rather large, conical, bright scarlet, productive. This and the four preceding varieties were originated by Messrs. ELWANGER & BARRY, of Rochester.

46. *McAvoy's Superior*.—Of vigorous growth, fruit very large, rounded, dark crimson, juicy, very good flavor, fine color, very productive. P.

47. *McAvoy's Pistillate, No. 1*.—A seedling from the *Iowa*, and bears much affinity to its parent in color and size: large, bright scarlet, very handsome, productive, but not high flavored. P.

48. *McAvoy's Extra Red*.—Large, beautiful, productive, moderate flavor and medium quality. P.

49. *Schneicke's Hermaphrodite*, or *Longworth's Prolific*.—Fair size, rounded, scarlet, sweet, very fine flavor, productive, of vigorous growth.

50. *Schneicke's Pistillate*.—Large, rounded, crimson, very juicy and good, but not equal to *McAvoy's Superior*. P.

51. *Moyamensing Pine*.—Secondary size, conical, crimson, juicy, not sweet, and but little flavor, strong fruit stems, ripens gradually, very productive. It is of vigorous growth, and assimilates greatly to the old *Hudson*, of which it is doubtless a seedling. P.

52. *Walker's Seedling*.—Fair size, dark red, fine flavor, productive.

53. *Californian Pine*.—Moderate size, scarlet, same form and flavor as the old *Hudson*, productive. P.

54. *Mexican Alpine*.—Found by the writer on one of the loftiest volcanic mount-

THE BLACK KNOT ON THE PLUM.*

BY WM. MERVINE, UTICA.

MANY causes have been assigned for the disease in question, none of which, so far as my information extends, are satisfactory. Some have supposed it to be occasioned by diseased sap, or vegetable ulcer; some, that it is the work of the curculie; others, with more plausibility, assert that it is the result of poison infused by the minute sting of an insect. But none of those entertaining the latter opinion have described the kind of insect, or its characteristics; and it is therefore fair to assume that their belief rests upon conjecture alone. The latter opinion, however, with the exception of the minuteness of the sting, is correct. It will be permitted me to say, that I believe myself to be first in determining the fact, and in ascertaining, certainly, the habits and character of the insect. I will, therefore, proceed as briefly as may be, and without regard to possible charges of egotism, for asserting in opposition to many scientific men on the subject, what I know beyond a doubt to be the origin of the excrescence, or tumor, and to describe the insect which causes it, its habits, and the best method of guarding against its attacks and increase.

The insect here referred to belongs, I believe, to the Hymenoptera class, and is about an inch in length; color, pale yellow; has four wings, and hind legs resembling those of the grasshopper, which seem designed for similar use; and, although furnished with wings, it uses them only, so far as I have discovered, for calling its mates. This it effects by shrill notes through the medium of vibrations, created by a rapid motion of them, and which affords the means of tracing it. The abdomen of the female is much larger than that of the male, in the extremity of which is concealed a sting of about a quarter of an inch in length, with which it pierces any shrub or limb selected as a receptacle for its eggs—often numbering a dozen or more, which are deposited with some acid poison in separate cells, longitudinally. From these eggs the larvæ are hatched—change to the pupæ, or chrysalis state, and emerge during the ensuing June.

The excrescence does not appear until after the escape of the insects, the swelling of which is caused by the circulation of the sap being arrested in its natural course by the poison infused, which flows round the punctured parts, extravasates, and gradually forms the tumor. On dissecting one of these tumors, a grub may be sometimes found, but it does not cause the excrescence. Any one may satisfy himself of the truth of the foregoing remarks by observing the appearance of the insect during the months of August and September, especially the latter, that being the season of coition, when it may be found making its deposits; these, on being completed, are varnished over with a water-proof substance, presenting a dark, glazed appearance, by which it may be known, and on carefully splitting a stung limb in the direction of the perforations early in June, the insect may be found in the larvæ state.

I have carried on for two years past a war against this insect, and never suffer one

* This paper was read before the the Utica Scientific Association the past winter.

to escape when it can be traced ; which, together with a judicious application of the knife in cutting off, and out, all the affected parts so soon as they appear and burning them, I manage to preserve and keep my trees clear of the unsightly tumors. If all those who are interested in the growth and preservation of those trees would adopt the course pursued by me, this destructive insect might, in time, be exterminated, or its effects, at least, very much lessened. Indeed, unless something be done to arrest its progress, many years, in my opinion, will not elapse ere the cultivation of the Plum and Cherry will have to be abandoned.

CULTIVATION OF GRASSES.

BY L. DURAND, DERBY, CONN.

ONE of the most important of all farming operations is the cultivation of the several kinds of grasses for hay and pasture ; for when the farm can be made to grow any or all the improved kinds of grasses well, any other crop, grains or vegetables, will grow well. We intend to say something of a few of the most important of the cultivated grasses.

Red Top.—Of all the many valuable kinds of grasses, we think none is better than Red Top either for cattle or horses. This is very heavy, and we think that there is less shrinkage in a ton of this hay, after it goes into the barn, than in any other kind. As an improver of soils, we are satisfied that, in the long run, there is no grasses, in all respects, equal to Red Top. This grass has a faculty or nature of spreading its roots over the entire surface of the soil, starting out all weeds and foul grasses, and making a close and firm sward. This is one reason why it is a better improver of soils than most grasses, because it affords a perfect protection to the soil against the hot sun, washing rains, &c. It delights to grow in rather moist bottom lands inclining to clay, yet it will grow well on high, dry, loamy soils, if the soil has been plowed to a good depth. We are speaking now more particularly of grass lands intended for mowing. This grass is also a good one for pasture lands, as it will continue to grow through the season where fed off by cattle. With Timothy grass this is not so much the case, as it is not inclined to grow much as after-math, unless in quite moist ground. Yet there are many farmers now who never sow this grass upon their land and of course they never have any, only what happens to come up naturally. After this grass once gets firmly rooted in the soil it will remain without much difficulty. Turn over a sward of this grass for winter grain, wheat or rye, and the next season after the grain comes up the ground will be almost entirely swarded over with Red Top, although no grass seed has been sown. But the better and more safe way is to sow the grass seed at every breaking up of the ground.

Timothy.—This grass is also one of the best of our cultivated grasses, and it is, perhaps, in most cases, more largely grown by farmers than any other one kind. For horse hay it is thought to be far preferable to any other, and it does make a good

rack hay for horses if well cured. Still, for neat cattle alone, we do not think that it makes as good hay as Red Top. Yet, where Timothy and Red Top are grown together, we think it far preferable for horses, or market hay, than where Timothy is grown alone; and if a little fine Clover is mixed with Timothy and Red Top, we think it will still be improved as market hay. But then Timothy grows but once a year when it is mowed, there being very little rowen or after-math, unless in low, moist ground. Here this grass is very apt to grow up in separate tufts or bunches, and not sward the ground over close, as is the case with Red Top. All farmers know that in the best cultivated meadows this grass is very apt to grow up in this way year after year without sowing the ground over in a close sward, unless it is in a low swale of moist ground. Here, on clean Timothy lands, after the third or fourth mowing, the crop will begin to fall short, so that in order to keep up the yield of hay the ground must be broken up and re-seeded. But if the grass is of Timothy and Red Top grown together, as it should be, then the meadows will hold out much longer in growing a good crop, as the Red Top forms a sward, and then breaking up need not be resorted to as often. When Timothy and Red Top are grown together, generally a finer and better crop of hay is made than Timothy alone, which, in strong ground, will grow up coarse and large.

Clover.—Clover grass is one of the best grasses for enriching a soil that is cultivated in our country. It also makes good hay, if well cured; yet there is always a good deal of uncertainty about making it into good hay. As a crop for hay we consider it the least valuable in this respect; but as a crop for plowing under, or feeding off by cattle, no crop of grass can begin to enrich the soil like Clover. Much has been said and written in regard to plowing under a crop of Clover as a green dressing, or feeding it off by cattle. Both ways are good, and both have their advantages. If a soil is to be renovated in the shortest possible time, we think it can be done best by plowing under one or two green crops of Clover when in full bloom. If a longer course is wanted, the best way is to feed off the crop by cattle through the season. This grass, unlike many other kinds, will continue to grow up through the whole season as many times as it is fed off. The better way is, where a large crop of Clover has covered the land thick, and when it is in full bloom, turn in as much stock as will feed it down in the shortest time. Managed in this way, very little old grass will be left to dry up, but all will be fed down together; and then a new crop will be constantly growing through the whole season. The roots of Clover grass extend a great way into the soil, and they are very enriching—much more so than any other grass we know of—so that it has become a proverb among improving farmers, that when they can get Clover to grow well on their farms, they can grow anything else. The roots of Clover strike deep into the soil, so that when it gets well rooted it will stand a great drouth.

For "lawns, or private grounds," connected with country residences, we think a mixture of Red Top, White Clover, and Blue Grass, sown together, would make a good covering for grounds of this character. What such grounds want is a covering of grass in the shortest possible time, and one that will form a close, tight sward.

However, much of this will depend on the after cultivation. Lawns require to be sheared, or fed down by sheep, a number of times in the course of the season, in order to get a close, tight, firm sward.

APPLICATION OF WIND AS A POWER FOR RAISING WATER.

BY J. P. KIRTLAND. CLEVELAND, OHIO.

A GARDEN engine, manufactured by DOWNS & Co., Seneca Falls, State of New York, enabled me to preserve many valuable plants, shrubs, and trees, during the severe drouth of last season. It was equally important as an implement of warfare in a contest I waged with the cherry and pear slugs, and some other depredating insects. The force with which it throws tobacco water, and other medicated washes, is sure to reach those enemies, however securely they are concealed. Its principles are simple, and the workmanship excellent. No gardener can well dispense with its use.

To pump from a well the requisite supplies of water was a work of no small labor. It led to the investigation of a method of working a pump by means of the wind. The practicability of the plan I am about to suggest, does not remain to be tested by experiment. During former years, a small wind-mill was in successful operation upon the farm of Mr. ANDERSON, five miles west of Ashland, Ohio, on the road leading to Mansfield. It worked a pump that amply furnished a large stock of cattle, which otherwise could obtain no water. Two days only had it ceased to perform its duties during more than two years, and that interruption was occasioned by the meddling of mischievous boys. It is still in operation for ought I know. The cost of this simple machine, including pump, did not exceed fifteen dollars.

By reference to Plate I, the principles on which it was constructed will be at once comprehended. The direct application of the power, without the intervention of any gearing or machinery, obviates much friction, hence a small amount only of power is required. The diameter of the wheel should not exceed four feet, a few inches less is

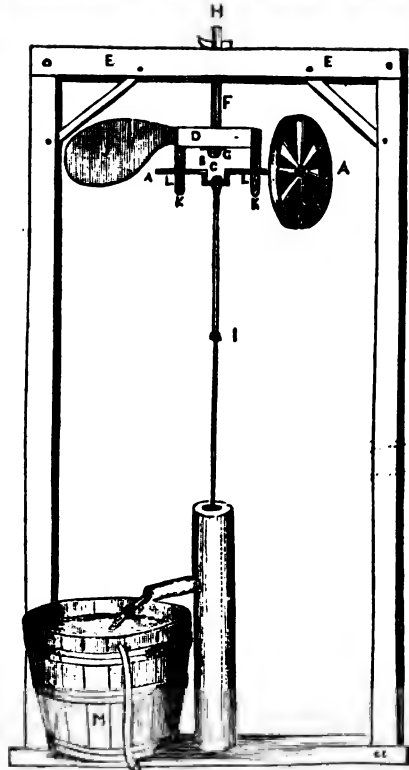


PLATE I

preferable. It is firmly fixed by its hub on an iron axle formed of a square inch bar. The sails or buckets are secured, at their outward ends, to a wooden rim, like that of a large spinning wheel. An inch and a half crank is raised on the axle at B, which, at that point, is cylindrical, and upon which is adjusted the upper end of the piston-rod of the pump C. This, when in motion, of course commands a play of three inches.

The body of the Mill.—A piece of pine plank, D, is suspended from the cross-girth of a frame, E, by an iron bolt, F, furnished at its lowered end with a large head, G, and a washer, and secured by a key, H, at the upper end, admitting of an easy circular motion of the body around the bolt. This motion is coincident with that of a swivel on the piston-rod, I. The rudder, or vane, will necessarily throw the wheel, at all times, into the wind. The axle, A, is suspended from the body by two straps of iron, through which it passes at L, L, where it is cylindrical, allowing free motion. The sketch on Plate I, was drawn from recollection without regard to perspective and proportion, but will perhaps illustrate the subject sufficiently.

A breeze which merely agitates the leaves of the trees will set the machinery in operation. A reservoir of some six or eight hogsheads was kept nearly filled, and when, in windy weather, a surplus of water was raised, it was returned to the well by a waste pipe, M. In the hands of an ingenious mechanic it might, no doubt, be greatly improved. Iron, in some of its parts, might be substituted for wood.

A well, suitably located, will furnish water enough for an ordinary garden, and without labor, by aid of this mill. How much it would improve our flowers, fruits and esculent vegetables, cannot be estimated, but would surely effect a revolution in our present modes of gardening here in the West, where we suffer much every season from drouth. Public tanks, inns, tanneries, and thousands of prairie farms, require its aid. Downs & Co., or some other active firm, would render the community essential service if they would manufacture a supply of these mills and adapt them to some of their improved pumps.

In all this, gentle reader, there is no Quixotism. Its feasibility has been amply tested. We may, however, trespass on the peculiar province of the Don, and, like him, get our heads bruised when we give play to our imaginations on this subject. We will venture on the movement.

Attempts are everywhere making to ornament and improve country and suburban residences. Few localities are naturally furnished with the means of supplying a *jet d'eau*, yet it is one of the most important ornamental additions art can supply to such places. One of moderate size can be constructed at any point where a well with permanent and abundant springs can be obtained within twenty-eight feet of the surface of the ground. Practically, beyond that depth, this mill will not raise water with much success. It is obvious that the same wind operating on one mill, and raising a given quantity of water twenty-eight feet, would, by acting on a second mill, raise the same water an additional twenty-eight feet.

Suppose an architect should sketch a barn, or other out-building, with two spires or towers of suitable height and dimensions, giving them an air of and beauty. The outline I have attempted to supply in Plate II, but not the fini

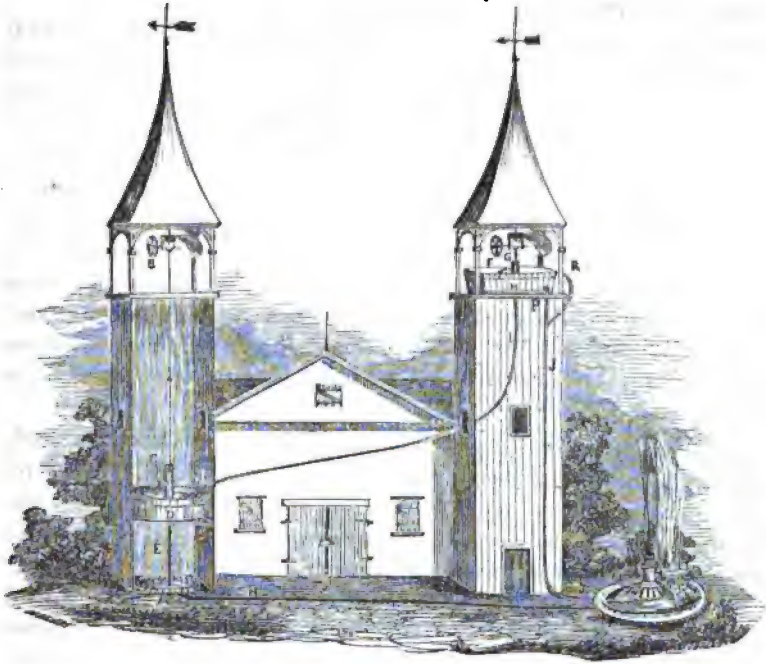


PLATE II.

A, represents a well, either under or contiguous to one of the spires. B, first wind-mill, working pump, C, placed on the center of a wooden cistern, D, of thirty or forty hogsheads capacity, whose bottom is perforated with pump stem, E, E, extending down into the water in the well. F, second wind-mill, working pump, G, and filling reservoir, H, of similar capacity, from reservoir, D, through a tube I, L. J, J, conducting tube. O, the hydropathic mermaid, cascading dolphin, or any other monster fancy may create. L, stop-cock to let the water on the jet. N, stop-cock to let the water directly into the basin, and not through the jet. The waste water is finally discharged into the well, A, by tube, M. The pressure on the tube, J, J, might be too heavy while the water was not discharging at the basin; stop-cock P would relieve it. The waste water from cistern, H, when full, may be discharged through tube R, into conducting tube, J, J.

By these arrangements, sixty or eighty hogsheads of water would always be at command, and at an elevation at which it might be conducted over the dwelling house, lawn, garden, trees, &c. During calm weather it would keep a jet of moderate dimensions in play for several hours, and in windy weather the supply would be constant. On the shores of Lake Erie no day passes without furnishing wind enough to keep the reservoirs replenished. In case of fire they would be equal to an ordinary fire engine.

Is this Quixotism?

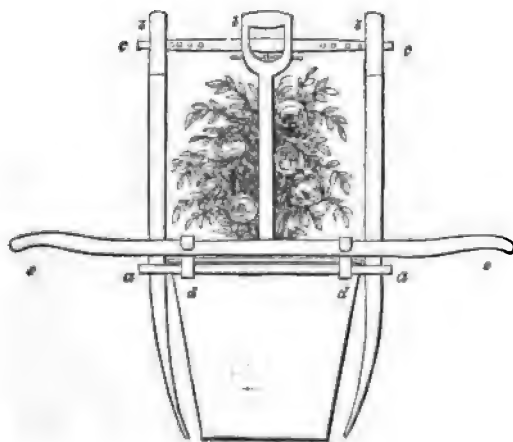
Foreign Notices.

M'GLASHAN'S TRANSPLANTING APPARATUS.—For several months past the English and Scotch journals have been giving accounts of an apparatus invented by a Mr. M'GLASHAN, of Edinburgh, for transplanting trees without disturbing the roots. Several successive trials in Scotland attracted very general attention, and a trial at Chiswick—the head quarters of all horticultural experiments in England—was determined upon. We have avoided giving any account of previous trials, looking to this one before the London Horticultural Society as likely to be reliable and decisive, as well as impartial. Such an invention as this cannot but be regarded with a good deal of interest in America, for we are certainly the most impatient planters in the world. We extract the following report of the Chiswick trial, and the cuts illustrative of the machine, from the *Gardeners' Chronicle*:

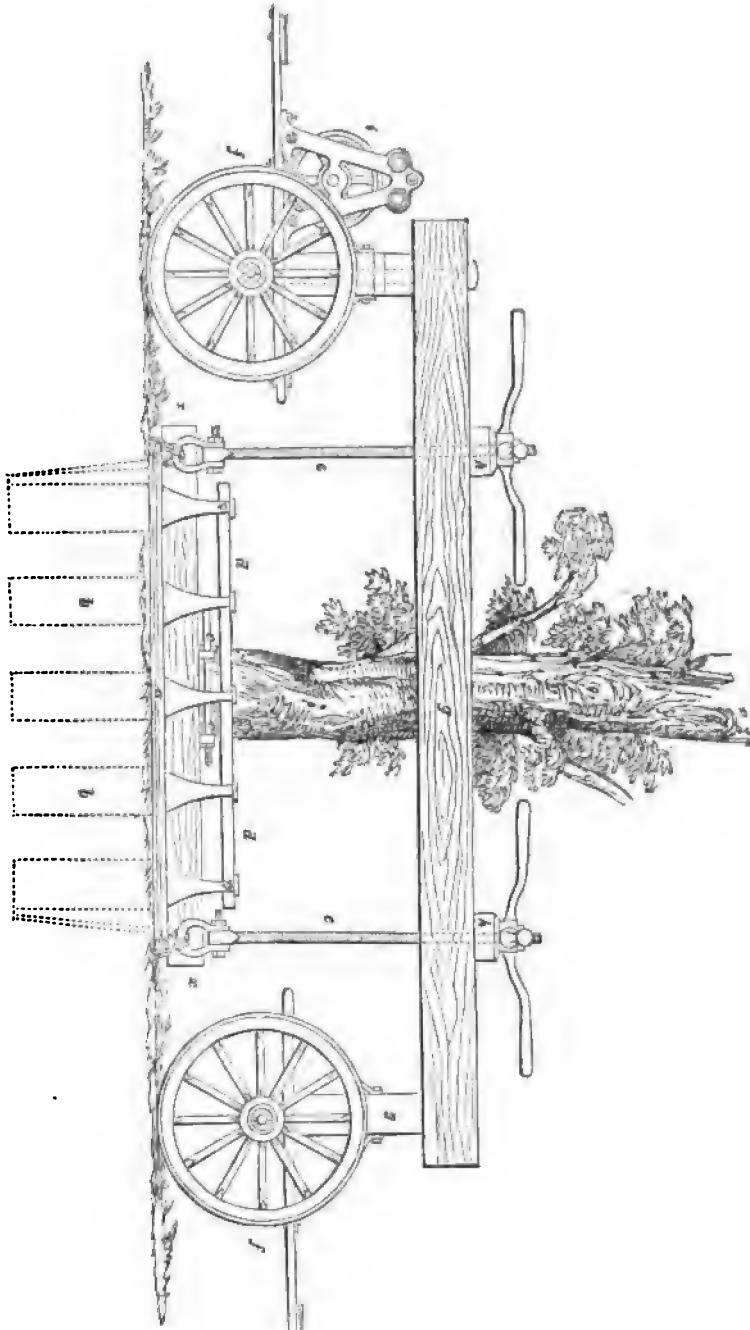
On Saturday last, in the Garden of the Horticultural Society, Mr. M'GLASHAN exhibited his apparatus for transplanting trees, in the presence of H. R. H. Prince ALBERT, attended by Captain the Hon. DUDLEY DE ROS; of Sir PHILIP DE MALPAS GREY EGERTON, Bart., Sir JAMES MATHESON, Bart., and Lady MATHESON, Sir JOSEPH PAXTON, Colonel CHALLONER, J. M. STRACHAN, Esq.; C. H. TURNER, Esq.; C. DEVON, Esq.; W. BROADHURST, Esq.; C. TOWNLEY, Esq.; C. W. DILKE, Esq.; and many other spectators, among whom were Mr. INGRAM, from the Royal Gardens at Frogmore; Mr. TOWARD, from Osborne; Mr. BARRON, Mr. GLENDINNING, Mr. OSBORNE, and many such practical men.

The object of the inventor of the apparatus was to lift plants from three to sixty feet high, without disturbing their roots or throwing them out of the perpendicular, and to carry them

when lifted to any other place, still retaining their earth and their original position. The principle of the contrivance will be understood from the annexed figure of a small apparatus.—Conceive the plant in this case to be surrounded by a stout rectangular iron frame (a), which is placed upon the ground. Then let the spades *b b b* be forced nearly perpendicularly into the soil within the iron frame. Next suppose an extension rod (*c c*) to be so applied to the handles of the opposite spades, as to drive them outwards by the leverage at *c* acting upon the fulcrum (*a*); the result will be that the ball of earth enclosed between their blades will be converted from a cube into a wedge with the point downwards, by which means the earth becomes secured within the



four spade blades. After this a collar is fixed to the stem of the plant, and to the two opposite sides of the iron frame (*a*), grasping the plant firmly and preventing its slipping. The next point is to attach to the four corners of the iron frame as many hooks (*d*), through which is passed a pair of handles, such as are used for a sedan chair (*e*); and then the plant is ready to be lifted,



which is done by two or more men raising the plant by its handles. Thus raised, it can be removed to any other place without disturbance, and a hole having been previously prepared, left there by unfastening the collar, withdrawing the spades, and uncoupling the iron frame.

The time consumed in this operation need not exceed ten minutes for an apparatus worked by four men.

In the case just described, the lift is taken by two or four men acting upon a pair of horizontal bearers. But when great weights have to be moved, then mechanical power is applied, as shown in the accompanying representation of the machinery actually employed on Saturday. In this case the frame (a) is of very strong T iron. The spades (b) have blades three feet long and iron handles; and within the handles passes a bar of iron (d d), to receive the lateral pressure of the extension rods. Two beams of timber (x x), lie across the frame, and hold fast the collar (c c), by which the trunk is grasped. Matters being thus adjusted the mass is ready for the lift, which is managed in the following manner: A pair of strong timber trucks (f f), are backed up to the two ends of the frame, each having above its axle a powerful wooden upright (y). Upon this is laid a frame or platform of timber (g) through which pass vertical screws (h h), attached to a powerful iron coupling, and working in collars secured to the platform. The screws are finally connected with the lower apparatus which secures the roots of the tree by chains passed through the couplings. This done the machine is ready for work. The lift is taken by means of the screws (h), which are worked by men standing upon the platform. When the mass is raised out of the ground the trucks are chained together, and may be moved in any direction required. On one of the trucks a crab (i) is shown; this is for the purpose of moving the machinery by means of a block and tackle secured to some tree or post, when circumstances are favorable to its employment.

The tree, earth, and machinery moved on Saturday were computed to weigh something more than thirteen tons. The tree, a black Italian Poplar, was fifty-five feet high. In half an hour the tree was lifted out of the ground, without swerving; and in the course of the afternoon was safely drawn to a hole forty feet off, into which it was so lowered as to be placed perpendicularly, although when taken out of the ground it was very considerably out of the upright. Had the tackle been better, far less time would have been consumed; but the screws were bad and difficult to turn, and the horizontal arms by which they were worked were inconveniently placed, all which caused a needless waste of time.

The spectators admired the principle of Mr. M'GLASHAN'S plan, and were gratified at the successful manner in which his work was done. For ourselves, we are disposed to believe that this method of transplanting is susceptible of modifications which will render it generally useful. The inventor desired to test his power as severely as was possible, and for that purpose he selected a tree very much larger than it is often necessary to remove. The world, in general, requires a smaller and less cumbrous apparatus; which can, of course, be constructed with strength proportioned to the weight that has to be lifted. For example, a pair of strong barrows might be substituted for the timber drags, everything else being reduced in proportion; or the apparatus need not be stronger than can be worked by hand labor; and this it was evident that the gardeners thought would be most generally required.

The advantages of the apparatus consist in lifting a tree and keeping it upright while being transplanted, instead of being broken and bruised by being thrown on its side, as is invariably the case in all other modes of transplanting; and in preserving the earth round the roots, either wholly or for the most part. A good deal of earth, no doubt, fell out on Saturday from within the spade-blades, owing to the excessively soft, wet state of the soil; but Mr. M'GLASHAN, in his specification, expressly declares that in some cases, in order to prevent the crumbling away of earth, it is necessary to enclose in a wooden box the lower part of the apparatus after it is lifted.

The objections to it may be stated to be the necessity of cutting through all roots which spread beyond the area enclosed by the spade-blades; but we think that very little ingenuity will get over this difficulty, even if increasing the size of the apparatus should be impracticable. A greater objection is the inability of spade-blades, driven perpendicularly, to pass through gravel; and, unless forks are substituted for broad blades, it is not clear how this is to be surmounted. It is to be remembered, however, that Mr. M'GLASHAN'S apparatus has never yet been applied to

practical use; and we entertain no doubt that it will receive very important improvements as soon as it comes into the hands of those who are conversant with the removal of trees.

Since the above was written, we have been informed that a machine similar to Mr. M'GLASHAN'S was contrived some years ago by Mr. STUART.

HOVEA CRIST.—This is universally admitted to be one of the most beautiful of greenhouse plants; but it is also one of the most difficult to induce to form what is termed a handsome specimen. It is easy enough to grow the plant to a considerable size, but its straggling habit, and tendency to run up without producing lateral branches, render it no easy matter to make it anything approaching a compact, well-furnished specimen. Well propagated, dwarf bushy plants must be got to begin with. They must not be pot-bound or stunted, for it is almost impossible to form handsome specimens of plants that have not been well attended to from the first; size is of little importance, but whether small or large, the plant selected to form a specimen should be in vigorous health and furnished with branches in proportion to its size. Supposing plants of this description to be procured about this season, the first thing is to examine the shape of the roots; and if these are abundant and healthy, shift into pots a size larger. Potting is a very simple operation, but in the case of this plant, as in that of many others, future success very much depends upon the manner in which it is performed, especially during early stages of growth. Efficient drainage should be carefully provided by means of a proper arrangement of a moderate quantity of potsherds, covering these with a thin layer of fibry pieces of the soil, intermixed with plenty of sharp sand. After potting, the plants should be placed where they will not be exposed to drying currents of air, and water must be very cautiously administered till the roots strike into the fresh soil. In the meantime, however, a moist atmosphere, and a sprinkling overhead with the syringe morning and evening, will be beneficial. Nothing is more injurious to this plant than allowing it when young to suffer for want of pot room; but beginners must avoid the one-shift system, otherwise they will probably find this extreme more ruinous than the opposite. By giving a small shift as early in spring as it may be necessary to do so, and a more liberal one—but this must be regulated by the vigor and wants of the plants—early in June, both extremes will be avoided. When the plants attain a useful size one shift in a season will be sufficient, and when in large pots, with a careful and liberal supply of water at all seasons, and an occasional watering with weak, clear manure water while making their growth, they will be found to do very well for several seasons without shifting.

Immediately after potting means must be used to secure a compact bushy habit of growth, and the best method I have ever found of effecting this is removing the more prominent buds by cutting back the shoots, and bending and pegging down the more vigorous ones, so that the buds desired to start into growth may be on the highest part of the shoot; this, with attention during the growing season, to regulate the growth by stopping over-luxuriant shoots, and bending them down, will be found to effectually correct the naturally straggling habit of this otherwise first rate plant; and if these trifling attentions are commenced early and persevered in, well-formed specimens will be the result. During the spring months the plants will enjoy a situation close to the glass, where the night temperature may average about 50°, and 10° or 15° higher by day; and where a moist atmosphere can be maintained, and air admitted freely on every favorable opportunity, without exposing the plants to cold currents. When mild weather sets in, they should be removed to a cold frame, which will be found an excellent situation for encouraging active robust growth during the summer; but some attention will be necessary to guard against a sudden change of temperature to which the plants might be exposed, especially if cold cloudy weather occur immediately after their removal to the cold frame; this, however, will be easily managed by keeping the lights close, and covering at night, or admitting air, according to the state of the weather. Unless the frame occupies a position shaded from the mid-day's sun, a thin screen should be thrown over the glass for a few hours in the middle of bright days, and air must be freely admitted day and night, merely putting on the lights during fine summer weather to assist in maintaining a moist atmosphere, by shutting them down for an hour or two, after syringing in the evening, and to protect the plants from heavy storms of rain. They must

be well attended to with water, and they should be sprinkled over-head with the syringe morning and evening, unless during cold cloudy weather; it should, however, always be ascertained before syringing whether the soil requires water, as the moisture on the surface occasioned by the syringing is very apt to deceive persons not much accustomed to the management of plants, and the ball is thus unknowingly allowed to become much too dry. Care must be exercised to get the wood properly ripened in autumn, and shading should be discontinued in August, and the plants fully exposed to sun and air, merely using the lights to protect them from heavy rains. They should be removed to a light airy situation in the greenhouse by the end of September, and kept cool, and very carefully supplied with water during the winter months.

Plants thus treated would probably blossom profusely in spring, but allowing them to do so would be a considerable loss of time, and those who aim at making large handsome specimens in the shortest possible period should cut back the shoots early in spring, so as to remove the blossom-buds, and this should be done at least a fortnight previous to removing them to a situation to encourage growth. This will allow time for the buds left to swell, and they will break more regularly and freely than if the cutting back were deferred until the plants were placed in a growing temperature. If the directions for stopping and training have been so far properly practised, nothing further in this way will be necessary at present; but when active growth commences, the same attention will be required this season as last, and the plants should be treated in every way as recommended for last season. If all goes on well, they will be nice sized plants before winter, and may be allowed to blossom in spring. While in flower they are well worth shading, which prolongs considerably the duration of the blossoms. When done blossoming the shoots should be pruned back to wood buds, and thinned out if necessary by cutting out weakly ones, and staking or pegging out the others, and when the buds start into growth a moderate shift may be given.

For soil, take three-fourths rich turfy peat, one-fourth turfy sandy loam; break these into small pieces, add about one-quarter sharp silver sand, and a sprinkling of clean potsherds, and intimately mix the whole together.—*Alpha, in Gardeners' Chronicle, March 5.*

GESNERA OBLONGATA.—When well managed this is decidedly a handsome plant, and it is more accommodating in its habits than most varieties of the genus, growing and flowering as it does for months in succession during winter. It is readily increased by means of cuttings, which may be obtained in spring from young growing plants. Firm, short-jointed, well-ripened pieces should be selected for the purpose, inserting them in sandy, peaty soil, covering with a bell-glass, and plunging in a gentle bottom heat of from 70° to 80°, where, in the course of a month or six weeks, they will be sufficiently rooted to bear potting off singly in small pots. It will be necessary to place the young plants in a rather close, moist, warm situation until they have become well established, when they may be removed to a cooler position, and allowed more light and air. During summer they cannot have better accommodation than a cold frame, kept moist and rather close, and shaded from the forenoon's sun; here they will make rapid progress, and must be shifted as may be requisite to afford sufficient space for the roots. In order to secure a dwarf compact form it will be necessary to stop the leading shoot occasionally; and if thrips make their appearance, and this plant when kept growing during the early months of summer is rather subject to them, tobacco smoke should be applied the moment they are perceived, and as often as required to eradicate them. As soon as damp cloudy weather occurs in autumn, remove the plants to a situation near the glass in a house or pit, where the night temperature can be kept at about 50° or 55°, which will be sufficiently warm to promote active growth. The plants may be allowed to remain here till about Christmas, when it will be advisable to remove them to a temperature some 10° lower, giving water very sparingly, in order to afford them a season of rest; but this sort must not be treated, when in a dormant state, like the tuberous rooted varieties which require no water during that period; a small allowance, however, will be sufficient, merely enough to prevent the soil from becoming excessively dry.

If the plants are wanted to flower during the winter months (and with early propagation, and

advisable not to excite them into growth till towards the beginning of June, when they may be placed in a rather close, moist situation, near the glass, in a pit or frame where they can be slightly screened from the mid-day sun. See that the soil is got into a moist healthy state; and it will also be advisable to examine the roots, giving a small shift to such as require more pot room. Maintain a moist atmosphere; keep the plants clear of insects; and stop the leading shoots occasionally, in order to induce compact bushy specimens. Towards the middle of July a second shift will probably be required, and this should be into the flowering pots; and as the plants are intended to continue growing and blooming throughout the winter, a liberal shift should be given. Water cautiously, and keep the atmosphere moist and rather close till the roots have got hold of the fresh soil, when air may be admitted rather freely, shutting up early in the afternoon with a moist atmosphere. In September they should be removed to where the temperature can be kept to about 55° at night, and light and air afforded to mature the wood, and induce the production of blossom. The best situation for the flowering specimens during winter is one where they will receive all the light possible, and where the temperature may average from 45° to 50° at night, allowing it to rise some 5° before giving air; and if properly supplied with water, and kept clear of insects, they will present, as I have already stated, a very pleasing appearance for some three or four months—a longer period than most plants remain in blossom.

When the flowers begin to be produced too thinly to be effective, the plants should be removed to a cool, shady situation, sparingly supplied with water, and allowed a season of rest; this ought to be attended to before they cease to produce flowers, which would not take place until the health of the specimens would be greatly injured. My practice is to remove them to a cool, shady situation in April, and when the weather becomes mild and settled, say about the middle of June, to place them against a north wall, where they are safe from rain and drip, giving them very little water. Shortly after allowing the plants to go to rest, the shoots should be thinned and cut back, so as to secure a dwarf, bushy habit of growth at the commencement of next season. Early in August they should be removed to a situation similar to that recommended for their growth last season, but they may be previously turned out of the pots; and if the soil is sour or in an unhealthy state, reduce the balls sufficiently to clear away the bad soil, repotting in the same sized or smaller pots; a moderate shift should also be given, either now or in the course of a few weeks, to such as require it. In the case of plants the balls of which have to be considerably reduced, a rather higher temperature should be afforded them until they are fairly established in their pots; and plants that are at all pot-bound will be greatly benefitted by an occasional watering with weak, clear manure water. With careful management, and occasionally reducing the balls, so as to afford the roots a portion of fresh soil, the plants will last in good condition for many years; but it is advisable to keep up a supply of young ones, as these are more easily managed than old specimens.

Good, rich, turfy peat, and light, sandy, turfy loam in the proportion of two of the former to one of the latter, with a liberal mixture of silver-sand and broken potsherds or earcoal, form an excellent compost for the growth of this plant. The peat and loam should be carefully broken up with the hand, and only the best pieces selected, and it should be well intermixed with the sand, &c., before use.—*Alpha, in Gardener's Chronicle.*

THE FUCHSIA AND ITS CULTURE.—Notwithstanding all that has been written respecting the cultivation of the Fuchsia, it is seldom that we see well grown specimens of it, more especially about London; but in the midland counties matters are managed somewhat better. We there find Fuchsias such as they should be, both as regards form, size, and profusion of bloom. Few, we think, who have been in the habit of attending the Birmingham shows will question the truth of this assertion. We trust, therefore, that the following remarks respecting this useful flower, by Mr. MAYLE, of that city, (as given in the "*Scottish Florist*" of the present month,) will be read with interest. *King Charming* and *Incomparable* are both sorts, we believe, of MAYLE'S raising, and we are also indebted to him for many other fine varieties. He has paid much attention to this favorite flower, and therefore his instructions respecting it may be followed with confidence. He says, "the soil best adapted for healthy growth is rich sandy loam from the top spit

of a meadow, one part; real turfy peat, rubbed through a coarse sieve, two parts; and dung from a hot-bed rotted into mould, one part. As soon as you have brought your plant from the nursery, turn it out of the pot, and if it is already in light soil put the ball just as it is into a pot a size larger. If it is in stiff soil, soak it in water until you can wash all the soil out; and in repotting carefully spread the roots, and see that the soil is well thrust through every portion, so that it may be solid. Let the plants be placed in the green-house until they begin to move, and then make up your mind whether they are to grow pyramidally or shrubby; if the former, let the main shoot go up, and regulate the side ones; if the latter, stop the shoot back, using the top for a cutting. If the shoot be long, it may be cut into lengths; one joint below the soil, and one or two above, are quite enough to strike. In the summer, a handglass on a common border will be found a sufficient shading from the sun. When the plants have struck, let them remain out of doors, or in a cold frame, but shade them from the mid-day sun. By these means, the dark varieties will be improved, and make handsome plants. The light ones will not bloom white; they will have a pink tinge on them, and will scarcely be recognised: and therefore it is better to bloom them under glass. There are, however, two or three rules to be attended to under all circumstances; first, to shift them whenever the roots appear through the soil; secondly, to give all the air possible in mild weather; thirdly, to water them thoroughly when watering; fourthly, to stop all rambling shoots; fifthly, to shade them during the heat of the day when in bloom; and sixthly, to let them rest during the greater part of the winter. In saving seed, never calculate on good flowers from coarse varieties; cross the fine ones with the large flowers if you will, but I recommend those of fine texture and habit. I herewith annex a few first rate varieties raised and sent out in this part of the country; at the public exhibitions they have invariably taken the lead. White varieties: *Hebe*, *Diadem of Flora*, *Bride*, *Lady Dartmouth*, *Purity*. Dark varieties: *Champion of England*, *Standard of Perfection*, *Prince of Wales*, *Scarlatina reflexa*, *Game Boy*, *Defiance*, *Roseola*. But the above fine varieties must bow to those which are coming out from this quarter this season."—*G. B.*, in *Gardeners' Chronicle*.

MR. MACINTOSH'S NURSERY, MAIDA VALE.—We remarked here an excellent specimen of the charming *Veronica Andersonii*, in the shape of a pyramidal bush about three feet high and two feet six inches across at the base, the under branches hanging down so as to partly conceal the pot. This plant, which is exceedingly unique in its appearance, was raised from a cutting about two years ago. With the exception of very severe weather, when it received the temporary protection of a shed, it has, we believe, all along been kept out of doors, and continually growing.—Mr. MACINTOSH's plan of managing such plants, when fine specimens are wished for, being to grow them one season and bloom them the next. The plant in question has, however, hitherto only been permitted to make wood, the flowering being prevented by a regular system of stopping, by which its present handsome shape has been acquired. It is just now showing bloom, which will doubtless be developed in succession during the whole of next summer, and possibly even up to Christmas. It may be worthy of remark, that this plant has been grown entirely without sticks, which Mr. M. thinks unnecessary in the case of hard-wooded plants in general. This is certainly, as we have often stated, one of the most handsome of *Veronicas*, and a sort which, at no distant date, must be as common as a Myrtle in every cottager's window. We also observed here a nice compact plant of the old-fashioned *Agathaea celestis*, which has been blooming for some time back, and is very useful for cutting from, its blue flowers having a cheerful effect in bouquets at this season of the year, when such colors are scarce. By growing a few plants of this during the summer, and stopping them back, they would come into flower now, and form not unattractive objects among other things in a conservatory or a cool greenhouse throughout the winter.—*Gardeners' Chronicle*.

Editor's Table.

NORTH WESTERN FRUIT GROWERS' ASSOCIATION.—In the February number, page 92, we gave some account of the proceedings of this Association. We now proceed to notice the discussion on qualities of fruits:

Discussion on Apples.—The *Autumn Strawberry* was recommended for further trial in the West.

"CYRUS BRYANT has fruited it several years; a fair grower, and abundant bearer, alternate years—ripe about first of September; juicy, with a very slight astringency.

"MR. PHOENIX has fruited it several years, esteems it highly—very productive—would plant it in a collection of six varieties in his locality.

"MR. McWHORTER—Its flavor is exceedingly delicate, of tender texture. Esteems it an excellent fruit. Passed as recommended by Committee."

With us, the *Autumn Strawberry* is a crisp, juicy, high-flavored fruit, uniformly fine. We think it bids fair to be worthy of very general culture. We are glad to hear such favorable reports of it from the West.

Sweet Nonsuch, (local name) from the general tenor of remarks made by several cultivators, this seems to be a hardy, vigorous, productive, sweet, baking apple.

Monarch.—We received this apple several years ago, from Mr. J. A. LAZELL, of Columbus, Ohio, and it has borne regular abundant crops of large, very beautiful and good fruit. The following remarks were made concerning it:

"DR. PENNINGTON has fruited it several years; tree a rapid grower, good, though not a prolific bearer, has been, with him, profitable—knows no early apple of its season superior—would recommend to bud or stock-graft, tender root-grafted.

"MR. BELLANGER received it from Ohio as *Monarch Sweet*. It is of an agreeable sub-acid flavor, has ripened last of August, in use through September. A beautiful fruit, sells readily at good prices in market.

"MR. AVERY considers it far superior to *Maiden's Blush*.

"MR. S. M. COB has proved it an early bearer."

Fall Pippin.—We have been anxious to know how this famous apple would adapt itself to the soil and climate of the West. The following remarks give unfavorable indications:

"PRESIDENT had it bear plentifully; soil with considerable clay.

"MR. FINLEY's experience ditto; soil alluvial.

"CYRUS BRYANT—Trees planted in 1837, have never borne a dozen apples in a season; soil, clay loam; hopes *Hawley* may supersede it.

"MR. McWHORTER has seen a few trees bearing well.

"MR. WILLIAMS—Where stock-budded or grafted, has seen it bear well, has several trees root-grafted, 12 years old, have never borne but little. Believes the different modes of propagation a subject of great importance to fruit cultivators in the West.

"MR. LOOMIS—It bears profusely in Northern Indiana, generally root-grafted; soil, oak opening.

"Mr. AVERY has five trees planted in 1840; had first good crop this year, say five bushels in all; soil good prairie. Would value one tree of *Rambo* or *Raules' Janet* worth seven of *Fall Pippin*; *Belmont* also superior, and *Fall Wine* is generally preferred to it."

The difference between the success of Mr. LOOMIS in Indiana, and that of the gentleman in Illinois, is very striking and worth further inquiry.

Red Gilliflower.—Recommended for further trial in the West.

Yellow Bellflower.—Recommended for general cultivation, by a vote of 12 to 11, (other members not voting)—"to be budded or stock-grafted" instead of root-grafted, the general impression being that it does not succeed well root-grafted.

Dominie.—All spoke well of its quality and productiveness; and it was passed as "very good for general cultivation."

Raules' Janet.—Generally considered very productive, and varying in quality from good to very good, according to locality, exposure, &c. We apprehend that, like our *Spy*, it needs a full exposure to the sun to bring out its excellence. Nothing said of the best mode of propagating it.

Winesap.—Only alluded to by two speakers, and they pronounce it productive and good.

Willow Twig.—Passed without discussion. This is one of the best long keepers of the West.

Fallwater.—Known also in the West as *Mountain Pippin*, *Tulpehocken* and *Pound* apple—highly recommended by three speakers, and passed as good for general cultivation.

White Winter Pearmain.—Unanimously pronounced valuable and productive. Passed as best, and recommended for general cultivation.

Belmont.—This is a beautiful and excellent fruit, but quite variable. We find it succeeds well in Western New York, and particularly so in Northern Ohio, and in certain soils and localities in Illinois. The fruit is somewhat liable to drop prematurely. Mr. ELLIOTT advises to cultivate it on dry, elevated soils, and to gather early. Recommended for limited cultivation.

Vandevere.—Pronounced variable. Mr. McWHICHER has seen it bear full crops on a clay soil—"hickory barrens," similar to the "oak openings" of Michigan. Mr. LOOMIS, of Northern Indiana, has had it do well in all respects on a clay loam. It needs good culture. Recommended for limited culture.

Talman Sweet.—"Recommended for general cultivation for baking and stock."

Detroit Red.—Passed as not sufficiently known, being confounded with *Black Pippin* and *Black* apple.

R. I. Greening.—From the testimony of eight or nine speakers the cultivation of this famous fruit has not been successful so far in the West, and more especially when root-grafted. One speaker (Mr. BRAYTON) goes so far as to doubt whether it would ever bear when so worked. [This is very remarkable. The finest trees of this sort, and indeed the best orchards in Western New York—and the world could not produce more healthy or productive trees—are all root-grafted. But we have spoken on this particular point in our first article]. "Passed as not sufficiently known to be recommended." This strikes us as a strange decision after several members having expressed decided opinions, based upon the experience of 15 or 16 years cultivation.

Roxbury Russet.—The experience of Illinois cultivators is unfavorable, in some cases not keeping well, and in others the fruit is spongy. Blossom buds injured, and frequently injured in the winter near the ground surface. Considered generally as being much better budded than root-grafted. Mr. LOOMIS, of Indiana, said with him "It had no competition in June.

and thinks more money can be made from it than any other variety. His trees are root-grafted. Has never noticed any difference in the productiveness of root-grafted and stock-worked trees."

Jonathan.—Recommended for further trial. Highly spoken of by Mr. BRYANT of Illinois, and Mr. LOOMIS of Indiana.

Ladies' Sweeting.—Not sufficiently known.

Hubbardson Nonsuch.—For further trial.

Baldwin.—Generally a failure in Illinois. Mr. LOOMIS said it bore well in Indiana.

Swaar.—Recommended unanimously for general cultivation, "when worked standard high, on thrifty seedling stocks."

Red Astrachan and *Hawthornden*.—Favorably mentioned.

Pryor Red.—Spoken of as a tardy and shy bearer.

The association adopted a resolution to petition the Legislature of Illinois to make fruit stealing larceny; also, appropriate resolutions on the death of A. J. DOWNING; and another, recommending the *Western Horticultural Review* as worthy the patronage and cordial support of every horticulturist in the West, being particularly adapted to that soil and climate. We are glad to see the *Review* thus recommended—first, because it deserves it; and second, because the information it imparts is much needed. It strikes us that the western cultivator stands peculiarly in want of minute and varied information on account of the innumerable difficulties of the climate.

SCHOOLS FOR YOUNG LADIES.—A garden should be considered a necessary—even an indispensable—appendage of every institution of learning. There both the mind and body of pupils and teachers, wearied and worn by study, might find recreation at once invigorating, refreshing, and instructive. What an influence might thus be exerted upon the tastes and habits of the rising generation! How the health and strength of delicate youth might be promoted, and all studies connected with natural history be aided! Are these things not worthy the attention of parents who are sending their children to district schools?

For young ladies, a garden is peculiarly important, and it surprises us to hear of parents sending away their daughters to some distant city, shutting them out from the pure air and from all sources of retired and healthful recreations, in most cases, for the flimsy honor of a name.

This matter has been brought to our mind now, by the prospectus of Mrs. WM. G. BRYAN, of Batavia, whose school now occupies the fine mansion of the late Hon. DAVID E. EVANS, attached to which is one of the largest, oldest, and finest gardens in Western New York. Batavia is a quiet, beautiful village, distinguished alike for its cultivated, pleasant scenery, and tasteful, polished society. Accessible, too, by railroads from every quarter, it is, in all respects, eligible for such an institution, and it gives us pleasure to aid in making it known.

UNIVERSITY EDUCATION IN MICHIGAN.—The increase and prosperity of agricultural journals in Michigan is not the only sign of a deep and general interest in rural pursuits. We are glad to learn that in the University at Ann Arbor there is now an agricultural course of Lectures, conducted by Mr. CHARLES FOX, senior editor of the *Farmers' Companion*, and Drs. SAGE and DOUGLASS. We hope that agricultural lectures will soon be regarded as an indispensable portion of University education in every State of the Union. The study of agricultural science needs to be elevated. It has too long been permitted to occupy an unworthy position.

BLACKBERRIES.—We find the following in the proceedings of a late meeting of the American Institute Farmers' Club, as reported in the *Agricultor*:

"THE NEW ROCHELLE BLACKBERRY.—The Secretary reminded the Chair that Mr. LAWTON, of New Rochelle, Westchester Co., was present, and that he was the gentleman who exhibited the remarkable stalk of a blackberry, which was then on the table; whereupon, the Chair requested Mr. LAWTON to give the Club some information regarding this remarkable new variety of fruit.

"Mr. LAWTON stated that one of his neighbors discovered, some six or eight years ago, a bunch of blackberry vines by the side of the road, of different quality from the common high blackberries, and so much superior that he was induced to transfer them to his garden. From this small beginning they have been propagated as much as possible. Mr. LAWTON first obtained them in 1848; it is his intention to set ten acres as soon as he can get the plants. He stated that the stalk exhibited had been headed back, so that it resembled a bush about four and a half feet high, with a spreading head, which he presumed from his knowledge of the general yield, had borne a gallon of fruit.

"The character of these berries is very unlike the fruit of the common high blackberry vines, which is long and full of seeds, while the new variety is nearly round, very pulpy, the pipe being large, in which the seed are entirely hid from view. He stated that he had measured many berries that were three inches round; that the general size and shape were as near like Hovey's seedling strawberries, as anything he could compare them to. The flavor of the fruit is sweet and rich, to a remarkable degree, and vines long bearing. His first crop ripened July 28th, and continued till the second week of September. The next, August 4th, and continued four weeks. Last summer, owing to the great drouth, they only continued about three weeks in full bearing. The vines grow almost equally as well in shade as in open ground; and if an opportunity is given, will climb twenty feet into a tree.

"Mr. LAWTON sold his berries last summer to a New York dealer for ten cents a basket—equal to about twenty-five cents a quart—the buyer picking them himself. It is the opinion of Mr. LAWTON, that this is an entirely new variety of the blackberry; and besides the greater value of the fruit, they bear garden culture much better than the other, or common variety. The demand for new plants is greater than can be supplied at present moderate rates—the price now being fifty cents."

GLOVER'S ARTIFICIAL FRUITS.—In giving an account of the Fair of the Metropolitan Institute, in Washington, the *Genesee Farmer* thus speaks of the exhibition of Mr. GLOVER:

"In the Fruit line, nothing could well exceed in beauty and truthfulness Mr. T. GLOVER's artificial fruits, of almost every kind grown in the Northern States. His display of pears, apples, plums, cherries, and strawberries, deserves especial commendation. Mr. G. resides at Fishkill, N. Y., and is constantly adding to his collection, which we hope to see purchased and placed in some agricultural museum to which the public may have constant access for study and improvement. The insects injurious to fruit trees and fruits, are true to the life; and the plan is equally applicable to all the larger insects that attack the plants and animals owned by man."

Notices of Books, Pamphlets, &c.

CHEMICAL FIELD LECTURES FOR AGRICULTURISTS. By Dr. JULIUS ADOLPHUS STOCKHARDT, Professor in the Royal Academy at Tharand. Translated from the German. Edited, with Notes, by JAMES E. TRESCHMACKER. Cambridge: JOHN BARTLETT. 1903.

There is so much that is technical, speculative, and visionary in most of the writings on the Chemistry of Agriculture that the title of "Chemical Lectures" will be somewhat uninviting to plain, practical cultivators; but we can assure them that this is not a book of

speculation. On the contrary, it is as plain and intelligible as any book can possibly be, and treats the all-important questions concerning the composition, relative value, and mode of applying the various substances used as fertilizers, in such a way as every farmer and gardener can perfectly well understand and appreciate.

No sensible man, who cultivates the soil, will say, "I do not need such a book, I know all about manures." If we heard any one say so, we should fear that he was hopelessly ignorant; for however old, or wise, or experienced we are, we have much to learn; and in regard to the best and most economical manners and modes of applying manure in such a way as will best promote the growth of the various field and garden products, we have nearly everything to learn. We have looked through but two or three chapters of this book, yet we have gleaned a few very useful hints that we shall soon carry into practice.

The following extract in relation to guano conveys an idea of the simple and practical character of the work:

"For a thorough manuring, the average reckoning is 4 cwt. of guano to the Saxon acre, or a full 2 cwt. to the Prussian Morgen.* Yet this amount, according to climate and soil, more particularly in mountainous districts, is frequently exceeded; while, on the contrary, a less quantity may be sufficient where climate and soil are peculiarly favorable.

"On the mode of application† the following remarks must be made. First, the guano must be prepared. This preparation is very simple, and consists in reducing it to a homogeneous, pulverulent mass, and mixing it with earth. The first is effected upon a barn floor, by sifting and threshing. The finer portion is first sifted off; then the remaining lumps and fragments of larger size are threshed, and again sifted, until they are likewise converted into powder. The last portions of the residue are often so yielding and viscid, that they flatten upon being struck with the flail, and will not pass through the sieve. In this event they may be either beaten together with a brick or stone, by which means they are easily reduced to powder or they may be added to the compost heaps which are absent on no good farm. The sifted guano should now be mingled with from twice to three times the same quantity of earth, or with a mixture of earth and ashes, and the whole shovelled together, until a thorough and entirely uniform mixture is effected. The earth must possess the ordinary state of moisture, in which it easily absorbs the guano without forming into balls or lumps. It is a good plan to make the mixture at least from four to six days before it is scattered over the soil; and still better to undertake its preparation at a convenient time, before work presses on the farm, for it very often happens that farming labor is crowded into sowing time, and the mixture of the guano with earth is then executed hastily and unsystematically, or perhaps not at all, the consequences of which are very injurious. If, however, the mixture is already at hand, these prejudicial consequences are avoided. The scattering in the field

* Literally, as much land as a man can plow in a morning;—about an English acre.

† It would not be proper to pass over this mode of preparation without some further notice.

"If a glass rod moistened with muriatic acid be held an inch distant from the surface of a saucerful of Peruvian guano just taken from the bag in which it is imported, a white cloud will be immediately perceived. This is formed by the union of the ammonia rising up and evaporating from the guano with the fumes of the muriatic acid, rendering it manifest that ammonia escapes from guano very readily at the usual temperature of the atmosphere,—of course more abundantly in hot than in cold weather. Hence it is evident that the exposure during the pounding and frequent sifting here recommended must be very injurious to the guano, and cause the loss of much of its most valuable ingredient.

"It is much preferable to start the bags on the barn-yard floor, and, after spreading out the guano an inch thick, quickly to cover it with powdered charcoal or fine burnt bone-black, the refuse of sugar refineries, or with dry gypsum, or with clay which has been rendered friable by exposure to frost and then broken up and dried moderately, or with all these substances together; thus spread layer upon layer alternately, and finish by covering up with the empty bags, and putting over these a final coating of any of these absorbing substances. In this way the ammonia will suffer very little diminution, and the mixture will be sufficiently incorporated when taken on the land, and plowed or drilled in, without the labor and loss attendant on turning over. The small lumps may be left in without prejudice; the few large ones may be easily separated by hand, and broken afterwards.—J. E. T.

is best managed in the same way as that in which lime is usually put upon the land, or by spreading from a seed-bag. It is well to strew it upon the last plowing some two or three days before introducing the seed, and then lightly harrow; on a light soil, to roll, and after this to harrow in the seed. Moist weather, during its application to the soil, (especially in spring or summer sowing,) exerts a very beneficial influence upon the action of guano.

"The addition of earth is beneficial in a great variety of ways. Pure and good guano is so rich in ammoniacal salts, as easily to corrode the tender roots of plants, more particularly in dry weather; by mixing it with earth, it is so enveloped and weakened that this injurious effect is no longer to be feared. In this way, moreover, just as in the covering over muck heaps with earth, the possible escape of aeriform manuring elements from the guano is cut off, since the porous earth has the property of absorbing and firmly holding these substances. Finally, by the addition of earth a more uniform distribution of the mass upon the land is rendered practicable, and the flying off of dust during dispersion prevented;—an inconvenience that otherwise is likely to occur, and may occasion inflammation of the eyes and other annoyances to the laborer.

"With *potatoes, green crops, roots, &c.*, a handful of the mingled earth and guano may be given to every plant in dibbling or planting. A little more than a quarter of an ounce of bird-manure, costing the fourth part of a farthing, serves in this way as an exclusive manuring for a plant. With other manures a third or fourth part of this quantity, whose value will not therefore exceed the twelfth or sixteenth of a farthing, causes a very marked increase of growth. Equally certain results are obtained if the mixture of earth and guano is scattered with as great uniformity as possible in the ridges in which potato sets are laid, or if, in case the guano should not at that moment be at hand, it is strewed over the surface of the field after the young plants have already sprouted up but may still be passed over with the harrow;—a mode of treatment that is confessedly of great advantage when the potatoes have attained the height of some four inches above the ground, and must soon be earthed up. *Garden produce* may be treated in either of these methods; for such plants, however, as also for grass and meadow land, watering with a solution of guano may be strongly recommended. For this purpose, one part of bird-manure should be treated with at least from 80 to 100 parts of water; since, if too strong, the solution of guano exerts a corrosive action upon young and tender plants.

"For top-dressing, which should be employed as circumstances may make advisable, in the autumn or early spring, guano is in like manner most judiciously employed when mixed with earth."

The work is for sale by D. M. DEWEY, of Rochester, who has been kind enough to place it before us.

A PRACTICAL TREATISE ON THE CULTURE AND TREATMENT OF THE GRAPE VINE. By J. FISK ALLEN.

The third edition of this work, enlarged and revised, has just been issued by C. M. SAXTON, of New York, the well known, enterprising agricultural book publisher. It is a useful and much needed book, and especially at this time, when Grape culture is attracting so much attention and inquiry. Mr. ALLEN is a practical and eminently successful Grape grower himself, and therefore well fitted to prepare a work on the subject on which people may rely with safety. The construction of graperies, the preparation of borders, the propagation and management of vines at all seasons and under all circumstances, the selection of varieties, and the treatment of diseases, are all discussed with great care and minuteness. We are given not only the experience of the author, but of the most successful growers of Grapes both at home and abroad. If the book be at all faulty, it is in its profuseness of extracts; but these are subjects on which we cannot know too much.

This edition does not differ materially from the previous one, except in its appearance which we regret to say is not so good. The new matter consists principally of a ch.

on the Culture of the Grape in Florida, by Hon. A. G. SEMMES; a chapter from Dr. UNDERHILL, on the Vineyard Culture of the Isabella; and notices of some new varieties of Grapes, the most important of which are some hybrids produced by Mr. AMOS W. STETSON, of East Braintree, Mass., and our correspondent, Dr. W. W. VALK, of Flushing, L. I. We observe, too, that some alterations are made in the special lists of varieties, and especially that for a retarding house. This difference will be seen by comparing the following lists:

SECOND EDITION.

5 Vines Black Hamburg, including Wilmot's new Black Hamburg.	2 Portien Noir.	1 Common Hall Muscat.
2 Muscat of Alexandria.	8 Tottenham Park Muscat.	1 Bordelairs.
2 Zinfindal.	1 Syrian.	1 Escholata Muscat.
5 Black Lombardy.	1 Red Chassela.	1 White Nice.
2 Charlesworth Tokey.	1 Black Prince.	1 Red Lombardy.
3 Wortley Hall Seedling.	5 Old St. Peters.	1 Queen of Nice.
	1 Black Frontignan.	* 1 Josling's St. Albans.

THIRD EDITION.

6 Vines Black Hamburg, including New Black Hamburg, Victoria Black, and No. 16 Black Hamburg.	3 Portien Noir.	1 Escholata Muscat.
2 Muscat of Alexandria.	1 Tottenham Park.	1 White Nice.
1 Zinfindal.	8 Syrian.	1 Red Lombardy.
5 Black Lombardy.	1 Black Damascua.	1 Queen of Nice.
3 Wortley Hall Seedling.	1 Black Prince.	1 Bowker.
	1 Old Black St. Peters.	1 Bishop.
	1 Common Hall Muscat.	1 Black Portugal, or Farrar.
	1 White Hamburg.	1 Prince Albert.

THE COLD GRAPERY: From direct American Practice. Being a Concise and Direct Treatise on the Cultivation of the Exotic Grape Vine under Glass, without Artificial Heat. By WILLIAM CHORLTON, Gardener to J. C. GREEN, Esq., Staten Island, N. Y.

In another place we notice the issue of a new edition of *Allen's Treatise on the Grape*, and here we have another touching the same subject. Mr. CHORLTON's, however, differs from Mr. ALLEN's in this, that instead of treating of Grape Culture in general, it is devoted exclusively to the *Cold Grapery*. He makes this a "speciality," and what he has written is based upon his own very successful practice. The whole subject—construction of houses, preparation of borders, planting, selection of varieties, pruning, training, &c.—is treated in a plain, simple manner, giving a great amount of information at a small expense both of money and reading. We commend the perusal of this treatise to all who desire information on this subject.

CATALOGUES.—Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs and Plants, cultivated and for sale by ANTHONY & McAFEE, Wachusett Nurseries, New Bedford, Mass.

ANSWERS to Correspondents.

(O. A., Paris, O. W.) We think the Osage Orange will be hardy enough for you, and if so, we would recommend it. Next to it the Buckthorn, whose chief defect is the want of a sufficient number of thorns. The native varieties of the Hawthorn that grow in your woods, will also make a good hedge if well managed.

* This proves synonymous with *Chasselas Muscat*.

The Syrian Grape may be had of any of the principal nurseries. See our advertizing columns.

The Fabiana is quite easily propagated by cuttings of the young wood placed in sand or very sandy earth. They will root quicker and surer if covered with a bell-glass.

(A. M., Bethany, Va.) You will find the address of most of the leading nurserymen in the advertizing columns of the *Horticulturist*. We do not know that we could prepare a more complete list if we should set about it.

(J. E. H., Indianapolis.) Hedge with Osage Orange by all means. It succeeds well, we understand, in your climate.

We would advise the Pears, Apples, and Cherries to be dwarfs or pyramids. Plums, Peaches, and Quinces cannot be dwarfed so successfully, and may therefore be grown as standards.

(A. Novice, Galesburgh, Mich.) You will find a description of the Wardian Case in the *Horticulturist*, volume 2, pages 405 and 406. We may reprint it at some convenient opportunity.

(V. A., Pleasant Ridge, Ill.) *Parsons' Treatise on the Rose* is the most complete that has been published in this country. *Buist's Rose Manual* may be consulted with advantage—a cheap, practical work.

(J. L. M., Holyoke, Mass.) We will carry out your suggestion as soon as may be convenient.

(A SUBSCRIBER, Dayton, O.) TWELVE BEST VERBENAS.—*Scarlets*.—Robinson's Defiance and Chauviere. *White*.—Hovey's America. *Rose Color*.—Kossuth (Sayers'), and Magnificent (Jackson's). *Variegated*.—Eclipse (Henderson's) and Madame de Gournay. *Dark Colored*.—Jenny Lind—maroon, and Miss Baldwin—bluish lilac. *Varieties with eyes*.—Adele, British Queen, and Madam Clouet.

These do not include any of the *new* ones advertised for 1853.

A lady correspondent at Sag Harbor forgot to give us her name, and therefore her requests cannot be complied with.

PROTECTING FRUIT FROM BIRDS.—Will you please through the columns of the *Horticulturist* give some method of protecting choice fruit from birds, as it may be of benefit to many of your subscribers. Last summer I had some fine strawberries on newly planted *Prince Alice Maud* vines, (a strawberry that promises to succeed well in this region,) but was deprived of getting more than the first three or four that ripened. The common cat bird was the one that did the stealing—and did it well, too, for I watched with my gun and shot several and caught two in steel traps, and hung cloths about over the fruit, but all of no avail. JNO. G. R. KALE.—*Lovettsville, Loudon county, Va.*

Some people say that shooting the first depredators frightens the others. Strawberries, and other small fruits, may be protected with nets, and so may dwarf cherry trees.

FOUR BEST EVERGREENS FOR CEMETRIES.—In the March number of the *Horticulturist* you have answered your Illinois correspondent's question as to the "six best evergreens." Will you now please name the four best evergreens for planting in cemetery lots, where large size would not be so desirable as the qualities of beauty of foliage, quick growth and hardiness. H. F.

We can recommend the Norway Spruce, Hemlock Spruce, Red Cedar, and Siberian Arbor-Vita, as four distinct beautiful hardy trees, of tolerably rapid growth. The *perus excelsa* (Fall Juniper), and *Juniperus Hibernica* (Irish Juniper), as also the Sw Juniper, are beautiful small trees, hardy here.

LICE ON APPLE TREES.—In the last number of the *Horticulturist* I noticed a cut showing a species of insect that infests the apple tree. Enclosed I send you another specimen of a "different breed." It is increasing on the trees in this section, and I have seen many trees so completely covered that it was impossible to see the bark on any part of it. Examined with a microscope late in the spring, numerous insects can be discovered under each one of the scales. What becomes of them as they grow up, this deponent knows not—whether they are a creeping or flying animal—nor how they spread themselves. But I wish to inquire if you are troubled in like manner in New York, (I am inclined to think that those on my trees were imported from Buffalo, whence the trees came,) and if so, what remedy you use to extirpate the creatures. Last year I washed my trees with soap and water, and I thought it did them good, but this spring they are more plenty than ever. I think some of trying very strong lye on those most affected and will try the experiment on one of them with strong tobacco water. If you can give us any useful information touching the premises, your subscribers in this vicinity will be very much obliged. JOSIAH BOND.—Kenosha, Wis.

The insect referred to is the *apple tree bark louse (coccus)*. You will find it described fully in *Harris' Treatise*, pages 221, 222, and 223, new edition. The following efficient remedy is given in that work: "A wash made of two parts of soft-soap and eight parts of water, with which is to be mixed lime enough to bring it to the consistence of thick white-wash." This to be applied with a brush, early in June, when the insects are young and tender. A wash made of two pounds of potash in seven quarts of water, and another, made of a quart of common salt in two gallons of water, are also recommended. The first we know to be effectual, when applied well at the proper time; the others, we have no doubt are equally so.

Will you oblige me with answers to the following queries in the next number of the *Horticulturist*?

Is there any species of Weeping Willow that is hardy enough to resist the cold of this latitude? I find that nearly half or more of the last year's growth upon one standing in my yard is dead. (1.)

May a hedge formed of young hemlocks be cut and trimmed without damage, as one of buckthorn might be! (2.)

Will you mention three or four hardy climbing plants, suitable to train up against the posts of a veranda, such as are of vigorous growth! (3.)

If there is no willow that will be proof against the frost of this climate, will you please name a tree that may be an appropriate substitute for it that is hardy. A SUBSCRIBER.—Shrewsbury, Mass.

(1.) The new American Weeping Willow, from Europe,—a charming, hardy, weeping tree.

(2.) Nothing bears the shears better than the Hemlock.

(3.) The Chinese Wistaria; the *Bignonia radicans*, or trumpet flower; the Scarlet Monthly, or Coral Honeysuckle, or Monthly Fragrant Honeysuckle; the *Aristolochia Sipho* (Birthwort); the American Ivy (*Ampelopsis*); and the *Periploca*, or Virginia silk, are fine hardy climbers. To these we may add the Ayrshire and Prairie Roses.

PROPER SEASON FOR PRUNING SHRUBBERY.—Will you have the kindness to inform me through the columns of your *Horticulturist* the proper season for transplanting and pruning shrubbery! Also, for transplanting native forest trees!—likewise the proper season for pruning and lopping, or topping, the native forest trees! THOMAS FISHER, JR.—East Brook, Lawrence county, Penn.

Shrubs may be pruned lightly, to improve their form, at any time. Transplanting and lopping native forest trees, any time from the fall of the leaf to the middle of April, in your climate.

WATER PIPES.—An article in the *Horticulturist* in reference to a supply of water for the garden, &c., has induced me to inquire what is the best method of bringing water in pipes? In the Patent Office Report for 1849-50 is a communication in regard to pipes of hydraulic cement, describing the manipulations to be performed in its construction. If you know about the cost as compared with lead or wood—also as to its durability, you would confer a favor by giving us an article on the subject. I understand that pipes of cement have been used in Western New York many years. ABEL BEIGGE.—Sharon.

Horticultural Societies.

PENNSYLVANIA HORTICULTURAL SOCIETY.—The stated meeting of this Society occurred in the Chinese Saloon, Philadelphia, on Tuesday evening, March 18th, 1853, the President in the chair. The sudden change from mild to severely cold weather, precluded the imposing display of large *Azaleas*, *Rhododendrons*, and fine green-house plants usual at the March meeting; yet those who attended were amply repaid with the sight of many interesting plants, and beautiful out flowers, in the tasteful designs, baskets and bouquets, shown. Mr. J. F. KNORR's gardener, from West Philadelphia, exhibited a dozen of choice blooming plants, six pots filled with *Hyacinths*, and the following new kinds: *Tempeltonia glauca*, *Abutilon Vanhouttii*, *Azalea alba striata*, *A. exquisita*; *Cinerarias*, *Carminata*, *Vicar of Wakefield*, *Formosa*, *Mrs. Sydney Herbert*, *Marianne*, and *Amie Robsart*. Mr. COPE's gardener brought a dozen select standard plants, a collection of *Cinerarias*, and two species shown for the first time—*Rhodostemma gardenoides*, and *Hypocyrtia strigillosa*. PETER RAABE, a large vase with a great number of blooming *Hyacinths*—a rich show.

On the fruit table were seen a small basket of *Strawberries* from Mr. COPE's houses; *Easter Beurré* Pears, from THOS. HANCOCK; *St. Germain* and *Nouvelle d'Esperin* Pears, and *Reinette franche* Apples, from Mrs. J. B. SMITH; and *Newtown Pippin* and *Carthouss* Apples, from ROBERT CORNELIUS. Also, two large collections of vegetables from R. CORNELIUS and C. COPE.

The following premiums were awarded:

Azalea—For the best grown specimen to THOS. MEEHRAN, gardener to ROBERT CORNELIUS. *Plants in Pots*—For the best twelve specimens to JOHN BELL, gardener to J. F. KNORR; for the second best to THOMAS MEEHAN, gardener to C. COPE. *New Plants shown for the first time.*—To THOMAS MEEHAN, gardener to C. COPE, a premium of two dollars for *Rhodostemma gardenoides* and *Hypocyrtia strigillosa*. The attention of the Society was particularly called to the new plants shown by Mr. KNORR's houses, *Tempeltonia glauca*, *Azalea alba striata*, *A. exquisita*, *Abutilon striatum Vanhouttii*, and a fine collection of *Cinerarias*, *Carminata*, *Vicar of Wakefield*, *Formosa*, *Mrs. Sydney Herbert*, *Marianne*, and *Amie Robsart*. And for an American seedling *Camellia*, a fine double white, the silver medal to JOHN SHENWOOD. *Boquet Design*—For the best to THOS. MEEHAN, gardener to C. COPE; for the second best to THOS. MEEHRAN, gardener to R. CORNELIUS. *Basket of Cut Flowers*—For the best to THOS. MEEHAN; for the second best to A. HALL, gardener to D. RODNEY KING; and a special premium for a basket to THOS. MEEHRAN; and another to PETER RAABE, for a large pyramid of *Hyacinths*.

By the Committee on Fruits—*Pears*—For the best ten specimens, the *Easter Beurré*, to THOS. HANCOCK. *Apples*—For the best ten specimens, the *Newtown Pippin*, to THOS. MEEHRAN; for the second best, the *Reinette franche*, to F. GUOIN, gardener to J. B. SMITH. And a special premium to THOS. MEEHAN, gardener to C. COPE, for a basket of *Hovey's Seedling* *Strawberries*.

By the Committee on Vegetables—For the best and most interesting display by a private gardener, to THOS. MEEHRAN, gardener to R. CORNELIUS; and for the second best to THOS. MEEHAN, gardener to C. COPE.

AD INTERIM REPORT.—The Fruit Committee respectfully report: That since the last stated meeting of the Society, they have received and examined specimens of the following varieties of Fruits:

From CHARLES KESLER—*The Reading*.—This valuable winter Pear has been noticed in several of our ad interim reports. The present specimens, which were eaten on the 11th inst., have strengthened the favorable opinion previously expressed by us, of its merits.

The Keim—which we have previously described, appears to be a late keeping winter Apple, assuming a more beautiful waxy appearance with the advance of the season.

Evening Party—This is the third time this delicious little Apple has been submitted to our examination, during the present season. Each successive trial has served to confirm our estimate of its value.

The Orange—A medium sized native Apple, from the garden of NICHOLAS LOT, of Reading. The original tree, which stood on the adjoining premises, is now dead. The fruit is roundish, slightly oblate, faintly ribbed, of a warm yellow color, approaching orange; Stem short and thick; cavity open, shallow, obtuse, irregular; basin shallow, wide, plaited; flesh yellowish, with a slight orange tint; flavor sprightly; quality "good."

The Ohlinger—A native Apple of Pennsylvania. It originated with Mr. OHLINGER, in Alsace township, Berks County. It fruited in 1852 for the first time. Fruit below medium size, roundish, waxy yellow, with a pale brownish cheek containing many white spots with usually a russet speck in each; stem three-quarters of an inch long, slender; cavity deep, wide, russetted in rays; basin wide, shallow, furrowed; seed brown, short, broad, roundish ovate; flesh yellowish white, fine texture, sprightly flavor; quality "good."

The Dumpling—A large, roundish, oval yellow Apple; stem short; cavity contracted, shallow; basin narrow, rather deep. This is entirely distinct from the *Dumpling* of COXE, and is a good deal cultivated in some parts of Pennsylvania for culinary purposes.

The Alsace—A seedling Apple of Alsace township; size medium; form conical; skin whitish yellow, with a pale blush on the exposed side; stem short, slender; cavity narrow, acuminate; basin deep, open; flesh whitish, fine texture, juicy, pleasant flavor; quality "good." Though eaten on the 12th of March, it is said to be in eating order in September.

The Fallensvalder or Fornwalder—The *Fallaewater* of DOWLING—A large, yellowish green Apple, with a brown blush, uniformly fair, and of "good" quality. It is abundant in our markets, and at this season of the year the largest Apple to be found there.

From W. BOAS, of Reading—*The Krouser*—This Apple has been described in a previous report, and is represented as being wonderfully productive.

From CASPAR HILLER—*The Hess*—A native Apple of Conestoga, Lancaster Co., Pa. Size medium; form variable, sometimes roundish, often conical; red, in stripes of different hues; stem short, rather stout; cavity narrow, moderately deep, slightly russeted; basin deep, narrow; flesh greenish white, tender; flavor agreeably aromatic; quality "very good."

Five gentlemen were elected resident members.

On motion adjourned.

THOS. P. JAMES, *Recording Secretary*.

A communication on the sexual character of the plants of *Hovey's Seedling* strawberry, by THOMAS MEEHAN, was read before the Society, which we shall publish next month.

DETROIT HORTICULTURAL SOCIETY.—The annual meeting of this Society was held on Monday evening, March 14th, when the following officers were elected for the present year:

President.—WM. ADAIR.

Vice Presidents.—J. H. JONES, M. H. WEBSTER.

Recording Secretary.—B. M. DAVIS.

Corresponding Secretary.—T. H. HINCHMAN.

Treasurer.—N. B. WESSON.

COLUMBUS HORTICULTURAL SOCIETY.—At the annual meeting of the Society, held March 5th, 1853, the following officers were elected for the ensuing year:

President.—BENJAMIN BLAKE.

1st Vice President.—ALEX. E. GLENN.

2d Vice President.—ANTHONY H. LAZELL.

Corresponding Secretary.—HENRY C. NOBLE.

Recording Secretary.—GEORGE G. COMSTOCK.

Treasurer.—JOSEPH H. RILEY.

Council.—FRANCIS STEWART, C. P. L. BALDWIN, J. WM. BALDWIN, and the President and Treasurer, *ex officio*.

Garden Committee.—JOHN MILLER, for five years.

A few specimens of fine fruits and flowers were exhibited, and several members expressed the opinion that thus far the prospects are good for a good crop of all the various fruits, and feel much encouraged to proceed in the labors and objects of the Society, and express the hope that they will have the aid of citizens generally, in prosecuting the laudable objects of the Society.

HARTFORD COUNTY (CONN.) HORTICULTURAL SOCIETY.—At the annual meeting of the Hartford County Horticultural Society, held April 2, 1853, the following gentlemen were chosen as officers for the year, viz:

President.—WILLIAM W. TURNER.

1st Vice President.—HENRY MYGATT, Farmington; 2d do, JOHN M. NILES, Hartford; 3d do, Dr. J. S. BUTLER, Hartford; 4th do, HENRY W. TERRY, Hartford; 5th do, CHARLES L. PORTER, East Hartford; 6th do, NOAH W. STANLEY, New Britain; 7th do, WM. G. COMSTOCK, Wethersfield; 8th do, NORMAN PORTER, Berlin; 9th do, E. A. HOLOOME, Granby.

Recording Secretary.—Dr. GURDON W. RUSSELL, Hartford.

Corresponding Secretary.—THOMAS R. DUTTON, Hartford.

Treasurer.—ERASTUS SMITH, Hartford.

Auditor.—H. L. BIDWELL, Hartford.

Standing Committee.—Alfred Smith, Wm. W. Turner, Dr. H. A. Grant, P. D. Stillman, Joseph Winship, George Beach, Jr., Dr. J. L. Comstock, Dr. Gurdon W. Russell, J. H. Goodwin, H. W. Terry, E. A. Whiting, H. L. Bidwell, Charles L. Porter, Henry Affleck, Daniel S. Dewey, John M. Niles, Dr. George B. Hawley, George Affleck, Charles T. Webster.

RHODE ISLAND HORTICULTURAL SOCIETY.—At the annual meeting of the Rhode Island Horticultural Society, the following named gentlemen were unanimously elected officers for the ensuing year:

President.—JOHN J. STIMPSON.

Vice President.—WILLIAM S. PATTEN.

Treasurer.—GILBERT CONGDON.

Corresponding Secretary.—J. KINGSBURY.

Recording Secretary.—JOHN F. DRESCOL.

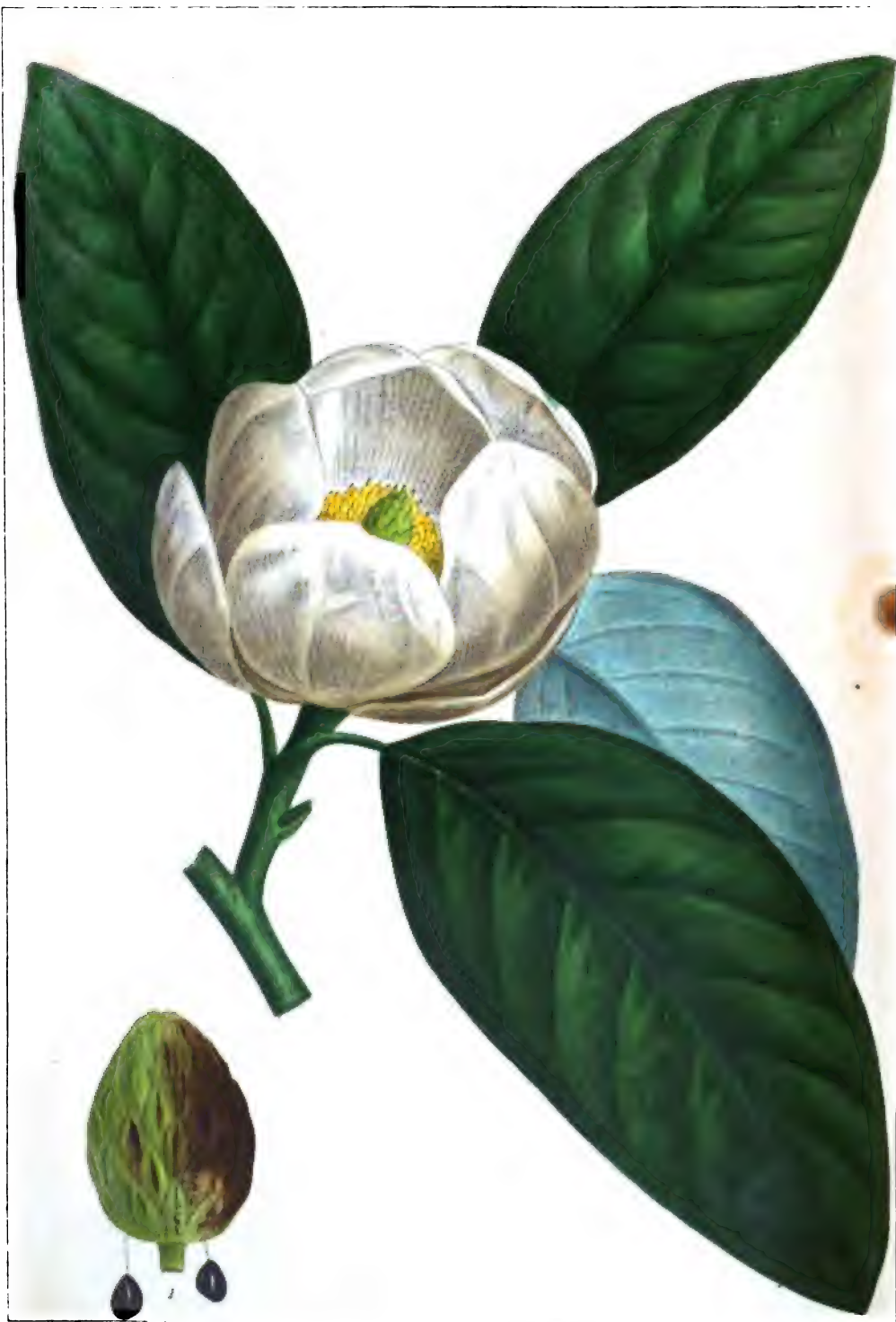
Executive Committee.—W. S. Patten, W. M. Snow, C. B. Manchester, James Eldred.

Fruit Committee.—Stephen H. Smith, Owen Mason, Geo. B. Peck, John J. Stimpson, E. Bills Pitcher, Lewis Dexter, James Eldred, D. H. Leonard, Silas E. Moore, John Holden.

Flower Committee.—Geo. Hunt, Richard Daglish, Levi Medcalf, Wm. Nesbit, W. H. Dyer, Geo. Anderson, A. Forsyth, Daniel E. Carpenter, W. M. Snow.

Vegetable Committee.—Geo. L. Clark, S. B. Haladay, A. Reed, W. Vial, J. Palmer.

Auditors.—James V. Smith, Elisha Dyer, Jr.



P. J. Redoute del

Gabriel

Small Magnolia or White Bay.
Magnolia glauca



American Horticulture.

It is rather singular that nearly every allusion made to American horticulture, in the British journals, is stamped with prejudice and either real or affected ignorance. We are sorry to have to say this, but it is the truth, as every one familiar with British literature very well knows. Is it worth our while to inquire why?

In this "age of steam," as it has been aptly termed, when the Atlantic ocean is reduced to a mere *ferry*, less formidable to the traveler than the channel between Dover and Calais, or the Hudson river between Albany and New York, once was—when ten days, or less, carries the news of the week from continent to continent, and travelers, on business or pleasure, flock hither and thither by thousands,—in such times, too, of printing and reading as these are, when the publishers of New York, Boston, London, and Edinburgh are making liberal weekly exchanges of the literature of the two continents, with the daily papers of New York offered in the streets of all the large cities of Europe while scarce a week old, and European journals landed on our shores by the cart load from every steamer—with American booksellers in London, and English booksellers in New York—in short, with the most intimate connection, in every respect, that could possibly exist between two countries,—one would suppose that if popular error, ignorance, or prejudice, ever existed in either in regard to the other, it would by this time have been pretty thoroughly broken up. We fear, however, it is not so.

In Europe one generation after another has imbibed the idea, both from history and tradition, that the American continent was a vast wilderness of woods and prairies, with here and there a partial clearing or a rude village; that the population was a mixture of negroes, Indians, and semi-civilized whites; that in two or three of the maritime cities, favored by a more intimate intercourse with the old world, there was the germ of civilization and refinement, but beyond their limits all was wild, uncultivated, *barbarian*. These ideas are at this time considerably modified, we admit, but those who travel through the country places of Great Britain, and mingle and converse with the country people, know that there they are not *much* modified. Nor have the most intelligent classes—the men who read and travel, who know the world and note its progress—been able to divest themselves wholly of their early impressions. Prejudice is one of the most fatal frailties of human nature. So obstinately blind and deaf is it, that it will not allow its victims either to hear or see the slightest evidence that conflicts with the notions and traditions in which they have been reared.

The great exhibition of 1851, in London, produced some striking and memorable illustrations of the views and feelings which exist in England in regard to America. The articles we sent there were held up before the world as a laughing stock, by the English press. They were the standing theme for all the wit, and sarcasm, and ignorance of reporters; and it was only after careful and thorough investigations and trials, the results of which bore down the most inveterate prejudice, that some half-

way admissions of merit were grudgingly accorded. The English newspapers themselves have made this a matter of history.

The visits of Englishmen to this country have unfortunately done very little, if anything, to soften the prejudices and diffuse a more truthful information. We thought that Prof. JOHNSTON, the distinguished agriculturist who honored us with a visit in 1851, would, on his return to England, give some correct information respecting the condition of our rural affairs; but we, and all others who thought so, were sadly mistaken. He proved himself no exception to the general rule, and made a report of his tour quite unworthy a man of his reputation and acquirements—one, indeed, that he and his countrymen may well feel ashamed of in every respect. Some of the most important things he had to relate were, that in Western New York wheat culture was about to be abandoned; that the people of New England were not so rude as travelers said; that within twenty miles of Boston numerous country boxes, or cottages, of all fashions and sizes, with their white painted walls and green jalousies, skirted the rail way! What a correct opinion his hearers and readers must have formed of Western New York and the neighborhood of Boston from such statements as these! He was present at the great New York State Fair, at Syracuse, and had ample opportunities of seeing the great display of fruit there—the greatest we are sure he ever saw before—and instead of giving his countrymen some correct idea of the matter, he merely says that “fruits receive much attention from the State Society, and had an appropriate place assigned them.” This was definite and valuable information, truly! What would we say of an American, supposed to be as competent to report correctly as Mr. JOHNSTON, who should visit an English exhibition and make such a meagre, worthless statement! Yet this is a fair sample of the way in which our affairs are usually disposed of by Europeans, and more especially English travelers. They traverse the country on railroads, at the rate of thirty or forty miles an hour, passing generally through the poorest lands; visit a few large towns, and return with the material for a book—and such a book! If they would do as Mr. OLMSTED did in England—throw aside their old prejudices, buckle on their knapsacks and foot it through the country from village to village, and from house to house, explore every field, and garden, and orchard, and barn-yard, and converse with the actual tiller of the soil of every condition—they might be able to say something creditable to us and to themselves,—at any rate to tell the truth. But they have no idea of embarking in such a tedious and toilsome way of exploring the country; they must do it by steam. They find a totally different state of things from what they have been accustomed to. There are no princely establishments to attract their attention, no great public gardens, no ducal conservatories, nor royal parks. We have but few retired, wealthy citizens, no monster estates. We are all workers, all busy, all in a hurry. Our buildings, fences, and roads, appear to them rude and temporary in comparison with the solid, substantial, costly and finished structures they have left behind; and hence they conclude that we have no gardens—that we know nothing, nor care nothing, about gardens or the more refined branches of culture—because we are not as England, are nothing.

If the English would read our agricultural and horticultural journals as we do theirs, they would know us much better than they do through the medium of professional tourists; but not one Englishman in a thousand knows that we have such journals, and the few who do are innocent of deeming them worthy of perusal. A very short time ago, one of the most intelligent horticulturists in England, who, for twenty years or more, has had extensive and intimate business relations with this country, remarked in a letter to us, that he thought it was time we had a weekly paper in this country devoted to agriculture and horticulture! It is a good many years since this idea was practically entertained here.

In the February number of *Blackwood's Magazine*, we find a long, well written notice of McIntosh's "*Book of the Garden*," in which the following passage occurs. We are sorry to have to criticise an article which has afforded us so much real pleasure as this has, but it is necessary to our present purpose:

"The pre-requisite elements necessary to originate and cherish a love of the horticultural art may, perhaps, be stated to consist in the possession of some measure of wealth and of leisure, in intellectual culture and refinement of taste and feeling, in a moderately bad climate, and a tolerably sterile soil. The two last elements we enjoy in Scotland in very considerable perfection, and hence the high character of Scotch gardeners. The versatilities of our northern sky make them vigilant, alert, provident, and inventive. In sunny Italy, boon nature with liberal hand threw into the lap of every gatherer the choicest fruits and flowers, and the old Romans had few incentives to study the resources of the horticultural art. Roman horticulture, obedient to the suggestions of a southern clime, chiefly displayed itself in cool grottos, and irriguous fountains, and umbrageous walks shaded by the tall cypress, and the sweet-scented bay. In America they may have the wealth, but apparently not the

"Retired leisure,
That in trim gardens takes his pleasure."

Their pursuit of the 'all-mighty dollar' is too passionate and intense to admit of interruption from the recreations of horticulture. A feverish and absorbing worldliness can find no pleasure in the tranquil delights of a garden. Our cousins across the wave seem scarcely to have reached that state of intellectual culture and repose that must apparently precede the refinements of horticulture. In America the apples are excellent, and that best of all apples, the *Newtown Pippin*, will not thrive out of it; but there the apple grows all but spontaneously. Horticulture, however, is making progress in the United States, of which, perhaps, the best evidence is the existence of a periodical devoted to the subject and published in Boston, and the somewhat curious fact that the *Kalmias* and *Rhododendrons* originally imported into Britain from America, and improved by culture, are at this moment undergoing a second transportation from our nurseries to the land of their nativity. Their denization in Britain ought to invigorate their constitutions. And yet, having breathed the air of England, it is possible that their lungs may repel the atmosphere where slavery reigns, and that at the sad sight they may sicken and die."

Now is it not astonishing, that one who writes so intelligent of the garden, and is so thoroughly imbued with a love of it as this *Blackwood* reviewer evidently is, should mar his beautiful essay by such a narrow, illiberal allusion to American horticulture! Why could he not have rather passed America by unnoticed? Was it too good an

opportunity for Johnny Bull to show his estimate of his "cousins across the wave?" It is true, we admit, in regard to a certain class of our population, that "their pursuit of the almighty dollar is too passionate and intense to admit of interruption from the recreations of horticulture," but it is *not* true of all. As we have already said, we are all active and busy—we have few idlers. We have in America very few hereditary estates or fortunes; every man here must make his own fortune. Hence it is that we have so few that embark in horticulture to kill time and to make an outlet for their surplus wealth. But let any candid man survey the suburbs of our cities and towns, let him canvass our country villages, and say whether the pursuit of the dollars has destroyed the love of the beautiful. Let us take Boston as an example. How many of the active merchants, professional men, and mechanics of that city devote themselves to their gardens, and produce results that the whole country feels proud of. Where in Great Britain can such a wealth of gardening, genuine out-door gardening—we do not speak of green-house gardening—as the Boston shows present? Let us take MARSHALL P. WILDER, as the most prominent example of a large class. The good he has done by his gardening labors will compare favorably with that of the Duke of Devonshire or the most illustrious benefactors of horticulture in the most advanced gardening country in the world. We may take our own little town of Rochester, 400 miles from the sea coast and not over forty years old, with a population of about 40,000, and even here we can point out a very large number of men closely devoted to commercial or professional pursuits who enjoy the pleasures of a garden. Small it may be, but well filled with the best of fruits and the most beautiful trees and shrubs and roses, that the world can produce. We have in our mind a friend, who is at the same time a busy lawyer and an active politician, who has a fruit garden, that for its size might challenge all Scotland, and his roses are the newest and best that can be purchased. He was able to show his neighbors the famous *Geant des Batailles*, *Chromatella*, and other famous varieties, while they were yet novelties in Europe. We could point to many of similar taste, and we could go through every town and village in the country and show that such men and such tastes are far from being rare.

Is there another country under heaven where there are so many gardens?—Scarcely a sober, able-bodied man in America, out of the large cities, but can boast of a garden. And that garden is not a mere tenement—it is *his own*; and when he plants his trees, and shrubs, and flowers, he feels that no human being has any right or title to them but himself and his family. What a small proportion of the population of Great Britain can rejoice in such a feeling. How few British subjects can go into their gardens with the same manly indifference, or can feel the same love and attachment to their homes, or have such inducements to make them comfortable and beautiful! How much of that which is squandered on the mammoth princely garden establishments of Great Britain is wrung from the enslaved million who never know what it is to taste even the luxury of a fresh salad—who cannot once a year buy a bunch of poor radishes, or a half withered rhubarb from the "green market"—who are never permitted to gratify the sense of smell with the perfume of a rose, and

whose "hearts never leap when the first sun's drop shows its welcome face on the green"—who, in short, never *see* a garden but through some aristocratic enclosure, or over the top of some exclusive, everlasting wall of stone, like that which encircles our penitentiaries! Look at the exhibitions of England, and you will see to what class the privilege of gardening is confined; the contributions are either from professional cultivators or from the titled nobility. How is it here? The contributors are working people—merchants and mechanics in the humblest walks of life—the large majority being their own gardeners; their productions, the fruit of their own labor, and skill, and taste.

But horticulture is really making progress in the United States, notwithstanding our "absorbing worldliness" and low state of intellectual culture. The best evidence of this progress is the existence of a horticultural journal in Boston, and the importation of *Kalmias* and *Rhododendrons* from Britain!

What evidence! Let us give our Scotch friend, who we fear does not see far beyond his own misty hills, some better evidence, or, at least more of it. We have *four* journals exclusively devoted to horticulture—one in Boston, one in Philadelphia, one in Cincinnati, and one in Rochester. The last has been in existence some seven years or more. But these are not all. We dare say that we might enumerate journals by the score, weekly and monthly, from Maine to Louisiana, all of which are devoted to agriculture and horticulture combined, and many of them with a circulation twenty-fold greater than the most popular journal published in the good city of Edinburgh—the modern Athens. How many horticultural societies have we? Not less than a dozen in the State of New York alone!—we could not guess at the number in New England and the West—besides our pomological societies, &c., &c. As to the importation of trees and plants, ask Messrs. RIVERS, SKIRVING, LE ROY, and fifty other European nurserymen, and they will reply that Americans not only import *Rhododendrons* and *Kalmias*, but fruit trees, and ornamental trees and shrubs, and roses, by the *ship-load*—absolutely draining the nurseries of Europe to the dregs. The catalogues of nurserymen and florists are ransacked, and every novelty must be had, from the newest Daisy or Hollyhock to the *Victoria regia* itself. The rare and costly orchids of India, the evergreens of North-West America, the *Rhododendrons* of the Himalaya, the novelties from the "celestial empire," in fact everything new and wonderful we must have as soon as it is announced. If importing plants be a test of our taste and progress, we are in a very hopeful state.

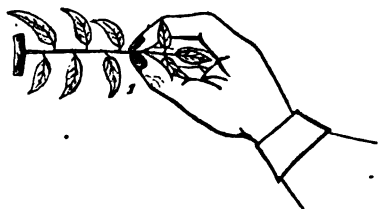
The allusion to slavery is far fetched and sadly out of place. Only for the well known propensity that exists on the other side the water to dabble in this matter on all occasions, in season and out of season, in fact never to name America without hinting at it, we should be quite at a loss to know why it was introduced here. In the discussion of political subjects, such a thrust would have been excusable; for, unfortunately, there seems to be in politics a something that tends to create and foster a hostile or unfriendly spirit between either nations or parties who represent opposite principles; but in horticulture, there is everything to promote harmony and to cherish whatever there be in human nature that is liberal, open-hearted and magnanimous.

Its mission is to multiply the comforts of life, to refine and elevate many tastes and feelings,—in a word, to make the world happier and better. In horticulture, we should allow no geographical boundaries to limit our sympathies or friendship, but recognize as a brother every laborer in the vineyard, whether his lot be cast in the temperate or torrid zone, under the government of a republic, or a monarchy, or a despotism.

A FEW HINTS ON PINCHING.

“TRAIN up a child in the way he should go” is a venerable maxim, and one that all good parents endeavor to carry into practice. Trees, like children, require training in their youth; the wise and skillful cultivator should aim at giving every shoot and branch the right direction while young and pliable, and nip every defect or deformity in the bud. The practice of too many who plant and cultivate trees, is either to prune them once a year, say in winter or spring, or else leave them entirely to nature; the consequence is that unless in rare cases where nature has endowed a tree with remarkable qualities as to regularity of growth, they grow up without that balance and symmetry which is always pleasing to the eye and necessary to their vigor, longevity, and productiveness. It should be well understood by every man who plants a tree, that from the moment it begins to unfold its leaves and develop new shoots, it requires constant care. This is especially the case with garden trees, which ought always to be beautiful as well as useful. We do not mean that a man should continually busy himself among a few trees, or waste his time in frivolous operations, as though they were a hobby-horse which he had nothing to do but ride; we can countenance nothing of this sort, but we insist upon constant discriminating care, a look over the trees once or twice a week, in order that every defect of growth, attack of insects, accidents, or diseases, may be timely discovered and the proper remedy applied. There is economy in this, if people but knew it, and all experienced cultivators do know it.

The chief remedy for defects of growth during the growing season is the operation termed *pinching*—nipping with the finger and thumb (fig. 1) the soft young shoots.



The practical part of this operation is plain enough, but the particular time at which it ought to be performed requires both judgment and experience, in order that it may accomplish the end aimed at. Pinching is applied to all trees and plants to improve or modify their forms. The plant grower who aims at pro-

ducing strong, bushy, well formed plants, arrests the tendency to grow tall and lean by commencing with his young plant when only a few inches high; and he follows up this pinching or stopping at regular intervals in the plant's growth, until secured such a profusion and regularity of lateral branches as to make his

plant a wonder. Such plants are the most striking examples of the influence of the pinching process that we can find in the whole range of horticulture. But this plant grower applies the finger and thumb in season—he does not wait till his plant has grown tall and misshapen, and then go to work to reform it. As soon as he sees well formed buds in the axils of the leaves, he knows that by stopping the terminal growth these buds will be forced into growth, and produce lateral shoots.

In the management of trees we find it very common for one or more branches to start with an undue share of vigor, and weaken all other parts of the tree by drawing and appropriating all the nutriment to themselves. A slight bruise or a bend, perhaps, will lead to the development of one of these branches at a point where no branch is required. Fig. 2 represents an instance of this kind. The tree became slightly bent, and this arrested the continuous flow of sap toward the summit; the consequence was the development of a very strong shoot, what the French designate very properly as a "*gourmand*." It controlled the whole tree, and left it at the end of the season in the misshapen condition represented in the cut. Now the careful cultivator would have observed the first symptoms of these results; that strong shoot pushing out with such undue vigor would at once have attracted his attention, and he would have placed his tree in an upright position, to aid the regular ascent and free circulation of the sap, and have checked this misshaped shoot, and thus secured an equal distribution of growth that would have left him at the end of the season with a tree something like fig. 3.



In the management of trees trained as dwarfs, pyramids, or espaliers, pinching is an indispensable operation. In almost all trees there is a natural tendency to grow most vigorously towards the top and at the extremities of the branches, and this requires to be kept in continual check during the growing season; for if one portion of a tree be permitted but for a short time to grow more vigorously than the others, the balance is destroyed and much time and severe measures are required to restore it. In the case of young trees that have been cut back for the purpose of producing the pyramid form, it often happens that three or four buds at the summit push so vigorously as to draw all the sap by those below them, and a tree somewhat like fig. 4 is produced. Now if the upper shoots next the leader had been checked by pinching, the lower branches would have been favored, and we would have got a tree like fig. 5.




In this way, under a great variety of circumstances, pinching is applied to counteract the defects of pruning and of growth. At this time the young shoots of trees

are pushing vigorously, and when they have attained say two inches in length, a selection may be made of such as ought to be preserved, and all others that have a vigorous appearance may be checked at once. All superfluous shoots, however, do not need pinching; there are a large number that never attain any considerable dimensions, and may be left entire. These are easily distinguished by the slenderness and smallness of their base. It would be improper to pinch these, as they do not affect the growth of leading shoots, and aid in maintaining the growth and strength of the parts where they are situated; besides, they generally assume the character of fruit branches in a year or two, and may be turned to good account.

It should be remembered that pinching has always a greater influence when applied early. If we wait until we see plump, well formed buds on the shoots, the pinching will have comparatively little effect, as the bud nearest the pinched end will immediately push, and the prolongation of the shoot will be but little retarded. But if pinched before the buds are formed perfectly, it takes them some time to effect their growth, and by this time the flow of sap has been, in a great measure, diverted into other channels; and even if the buds do break, the shoot does not acquire much extension, as it most generally becomes a *fruit branch*. It is on this principle that pinching is performed to promote fertility; sometimes very bad results follow *late* pinching. Towards autumn a shoot furnished with well formed buds is checked, and immediately several of these buds push, and make weak, watery shoots that are killed by the winter. These results are often produced by cutting scions for buds in the months of August and September. In some cases when the tree is naturally disposed to early fruitfulness, the buds become fruit buds; but in very many cases they start into growth. Grape vines are very often urged into this anticipated growth by stopping the canes at an improper period. This is a point that demands particular care in the management of both trees and vines.

We have touched somewhat minutely upon this subject in order to answer the queries of several correspondents. We should gladly give more ample explanations if space permitted, but we think that the hints we have thrown out will enable intelligent amateurs to prosecute the summer management of their trees with some measure of success. One thing we must impress upon all who attempt to control the growth or forms of trees, which is, that they must study well the laws of growth in general, and the particular mode and habits of growth and bearing of both species and varieties. This will appear quite evident to all who will take the trouble to observe how much difference there is between the opening of both leaf buds and blossoms on different varieties of the same species. One variety of apple will have made shoots two inches long before another has opened a bud. The *Northern Spy* is as much as ten days leafless after many other sorts are green. The *Belle d'Orleans* cherry is in leaf and blossom ten days before many others. We quote these instances merely to draw attention to this interesting and important point.



ASIATIC CONIFERS.*

BY JOHN SAUL, WASHINGTON, D. C.

CRYPTOMERIA JAPONICA—*The Japan Cedar*.—What a beautiful tree is this! and how useful in our climate, where I have no doubt it will be as much at home as in the Provinces of Northern China; it is a very rapid, vigorous grower—I have known a young plant in England grow four and a half feet in one summer, and this is not unusual. In this country it is also exceedingly rapid in its growth. Plants of it, which I had seen in Britain about twelve feet high and feathered to the ground, were already a combination of grace and beauty. Too much cannot be said of this tree, of which, indeed, as yet, we know but little. Hear Mr. FORTUNE on it: "Never in my life had I seen such a view as this—so grand, so sublime. High ranges of mountains were towering on my right and on my left, while before me, as far as the eye could reach, the whole country seemed broken up into mountains and hills of all heights, with peaks of every form. While gazing with wonder and admiration on the scene, my attention was arrested by a solitary pine tree of great size, standing about a hundred yards from the gateway; no other trees of any size were near it. Its solitary position near the pass, and its great height and beautiful symmetry, made it appear more striking. What could it be? Was it new, or did we already possess it in England? I must confess that for a few seconds I had eyes for nothing else. Chairs, coolies and mountains were all forgotten, and I believe had the guard of celestials attempted to prevent me from going into Fokien, the only boon I should have asked at their hands would have been to be allowed to go and inspect this noble pine. The Chinese guard, however, had not the slightest intention of interfering with my movements, and, as the tree was on the road side, I soon came up to it, and found it to be the Japan Cedar (*Cryptomeria Japonica*), a tree which I had already introduced into England, and which, even in a young state, had been greatly admired there. I had never before seen such a noble specimen, and although I would rather it had been something new, I felt proud of having been the means of introducing into Europe a tree of such size, symmetry, and beauty. It was at least one hundred and twenty feet high—it might be much more—as straight as a larch, and had its lower branches drooping to the ground. It had not been 'lopped,' like other Chinese trees, and was evidently preserved with great care. My Chinaman looked upon it with great admiration, and informed me it was the only specimen of the kind in this part of the country, and that it had been planted by some former Emperor when he crossed the mountains." The plants of this distributed by the Horticultural Society of London about seven years ago, are now bearing abundance of seed in Europe—indeed, many have done so for the past three or four years; we may, therefore, expect it will soon become plentiful, as it seeds in such a young state. There is a variety named *Lobbianum*, which, in a young state, shows little dissimilarity from the species. Native of the Northern Province of China and Japan.

* Continued from May number.

CRYPTOMERIA JAPONICA NANA—*Dwarf Japan Cedar*.—This appears to be nothing more than a variety of the above. It grows no higher than a bush, and is reported as very pretty.

ABIES BRUNONIANA.—This very beautiful tree is closely allied to *A. Canadensis*, but may readily be distinguished by its much larger foliage. It grows about seventy to eighty feet high, with spreading, pendulous branches. Those who know and admire our common Hemlock (and who does not?) will be delighted with this exquisite tree. It may be asked, Is this tree hardy? In England, to my own knowledge, it suffers from cold; but this, I think, is more owing to the want of ripeness of the wood in the fall than to the degree of cold; here, with us, the wood will be more thoroughly matured, and it will stand more cold; and should it require a slight protection while young, what lover of trees will refuse it? Major E. MADDEN* says of it: "Dr. HOOKER has recently found it in Sikhim, forming a narrow belt of 1,000 feet, confined to very narrow gorges between 9,000 and 10,000 feet, on the immediate (south) flanks of Kunchinjunga, probably the loftiest peak in the world, being about 28,000 feet. In the innermost valleys the limits are 8,500 and 10,500. The Gorkhalee name is "*Thingia*," or "*Tingoorisulla*;" the Bhotiya, "*Semadoong*." Dr. HOOKER considers it to be by far the most beautiful of Sikhim pines, whether as an individual tree, in groups, or in forest masses. One specimen was twenty-seven feet in girth at the height of five feet." It is also indigenous to other parts of the Himalayas, and found on pretty high elevations.

ABIES PINDROW; *syn.* **PICEA PINDROW**.—This I may safely call one of the finest Silver Firs in the world. Our own north-west coast, with California, produce some noble trees—as *A. grandis*, *nobilis*, *amabilis*, *Douglasii*, &c.—trees which may well associate with this, but who shall decide as the most beautiful? Dr. HOFFMEISTER records instances of *Pindrow* which he met on several of the lofty passes between Toongnath and Gungotree, which he estimated from thirty to forty feet in circumference, and about two hundred feet in height. In a young state this tree has been confused with *Webbiana*, but botanists who have studied them in their native habitat, describe them as quite distinct. Major E. MADDEN writes:* "Dr. GRIFFITH describes *Abies densa*, abundant on all the northern mountains of Bhotan, in terms which lead us to conclude this, and especially *Webbiana*, to be the species intended. He calls it 'the Black Pine;' alludes to its 'columnar' form, and says it is 'the marked indicator of great elevations,' fixing its lower limit at 8,800 feet; the upper at 12,478, and even 13,000. He notes 'many pines dead as if blasted'—'as usual, many blasted from lightning;' characters and limits well suited to include both; the *Pindrow* generally commencing at about 8,000 feet, and *Webbiana*, exclusively, attaining 12,000 or 13,000. It is possible, however, that the *Pindrow* may be absent from Bhotan; Dr. THOMPSON does not recognize them as really distinct species. There can, however, be no doubt that in habitat, and in several marked peculiarities, there are constant differences; and between what we term a species and a variety thus characterized, the distinction seems sufficiently wide to entitle the latter to be so

*Journal of the Agricultural and Horticultural Society of India. Vol. VII., part I.

classed also. *Pindrow* forms dense forests on all the great spurs of the Kumaon Alps, toward the heads of the Pindur, Turjoo, Ramgunga, and Kalee rivers, where (as in Gurhual) the Khushiya name is *Ragha*; the Bhotiyas, of Byans, call it *Woomun*. In Central Kumaon it is confined, as far as I have observed, to the great mass of Bhutkot and Boora Pinnath, from about 7,000 to 9,000 feet, where it clothes the sources of the Kosilla in a forest of unusual gloom and thickness." Coming from such great elevations there can be no doubt but this majestic tree will be perfectly hardy in the Middle if not our most Northern States. In foliage it is much larger than the common Silver Fir, and of a deeper green. The shoots and whole plant is robust, large and vigorous.

ABIES WEBBIANA; *syn. PICEA WEBBIANA*.—This near ally of *Pindrow* has been much confused with it. To an ordinary observer there does not appear much difference; yet the line of distinction is well defined. Dr. GRIFFITH informs us: "This species is rare below 9,500 feet; constitutes vast woods at 12,000 feet below the belt of Rhododendrons in Bhotan, as on the Rodoola Pass. It has a tabular form, and very sombre appearance, and can be recognized even at great distances by its black columnar Palm-like appearance." Dr. HOFFMEISTER found it shooting up to one hundred and fifty feet, and twenty-four feet in girth, along the great spurs south-east of Reithal on the Bhagiruthee Ganges. Major E. MADDEN writes: "On the northern side of the Shatooe Pass it forms most dense and extensive forest below the birch, at Atting Wodar, and is even still more magnificent lower down, between the Ootulmai Ghatee and Panwee village." "Notwithstanding the whiteness of the under face of its leaves, the general effect of the Himalayan Silver Fir is exceedingly dark and gloomy—more intense, indeed, than that of the Cypress, which, from any distance, it a good deal resembles. The form has pretty nearly the tall columnar outline of the *Pindrow*, with boughs somewhat less bushy and pendulous; on the whole, the long-leaved, thorough-going black *Pindrow* must be pronounced the handsomer tree." Of the hardiness of this, like the preceding (*Pindrow*), there can be little doubt. Coming to us from such great elevations, judging from long experience of these trees grown contiguous to many Californian and western coast species, I should pronounce them much hardier than the latter. The winters of California are mild and humid—hence the delicacy of many species from there; but the species which come from high altitudes, as well as from the extreme north-west coast, must in the Middle States be perfectly at home.

ABIES PICHTA; *syn. PICEA PICHTA*.—This very pretty species is rather extensively grown in England, where are to be found many handsome specimens, though none of a very large size. It is very distinct and peculiar in its habit, and cannot well be confounded with any other. In the Middle and Northern States it is perfectly hardy. A lofty tree. Native of the mountains of Siberia and the Altay.

ABIES ORIENTALIS.—If it is fair to judge from small specimens, I should say of this: It has as dark foliage as our dark spruce, as long as the Norway, and forms as lofty a tree, and as beautiful in every point as the latter. A question may be raised whether this tree is or is not hardy in the Middle States. Judging from whence it comes, a

little caution may be necessary when planted out, in the way of protecting it, &c. At present this species is by no means plentiful, and consequently commands a high price. Native of Asia Minor and eastward.

ABIES JEZOENSIS.—This magnificent coniferous tree is one of Mr. FORTUNE's introductions. Dr. LINDLEY* writes of it: "According to SIEBOLD, the Jezo Spruce, so called because it grows on the Islands of Jezo and Krafu, in the Empire of Japan, whence it has been introduced into the gardens of the wealthy inhabitants of Jeddo. He describes it as a large tree, with a soft, light wood, employed by the Japanese for arrows and in the construction of domestic utensils. The leaves are said to remain seven years upon the branches." In England it proves perfectly hardy, and most probably will in this country. At present it is scarce, and the plants of small size in cultivation.

ABIES KHUTROW; syn. SMITHIANA—The Weeping Spruce.—This extremely graceful and elegant tree comes from the Western Himalayas, at heights ranging from 6,500 to 10,000 feet. It will in all likelihood prove hardy, though not as much as *Webbiana*. It generally occurs on the mountains next below the latter species. It is very variable as to height, and is noted by different travelers as ranging from fifty to one hundred and fifty feet. Compared with the Norway species, the branches are more gracefully pendant, the foliage longer and of a deeper hue, the cones longer, and hanging pleasingly from the branches. Major E. MADDEN says: "The principal end and design of the Himalayan Spruce, like that of the lilies, which neither toil or spin, is to be sought in its extreme beauty." Specimens in Britain, some thirty feet in height, have already shown the native Himalayan beauty of this lovely spruce.

(To be continued.)

SEEDLINGS vs. GRAFTS, OR TOP-GRAFTS vs. ROOT-GRAFTS.

BY F. K. PHENIX, DELAVAN, WIS.

SEEDLINGS, it is not necessary to define. Grafted, or budded varieties, are those selected from the former on account of the superiority of the fruit, and other good qualities, as hardihood and productiveness, and propagated mostly by budding or grafting, generally upon seedling stocks, or, until within twenty-five years, when an improvement or innovation called root-grafting has been widely introduced.

With respect to the general system of grafting or budding, it were folly to question its safety and utility when properly used, though unquestionably an impost to be resorted to when necessary and avoided when practicable. The point is simply to what extent shall this practice be carried? And in view of the vast importance of horticulture—in view of its increasing risks and responsibilities—everything pertaining to that prime operation should be carefully investigated.

Grafting, or budding, considered as an abstract mechanical operation, performed under favorable circumstances—as, for instance, to graft or bud a young tree 1 its own

* Paxton's Flower Garden.—Vol. I, p. 42.

wood—cannot be regarded as inherently objectionable or dangerous, or as exerting any possible influence, other than for the time being to lessen its size or retard its growth. It is only in its perversions or accidents, its newly created world of changes and circumstances, that it can work injury. In the endless variety of combinations produced there must be an increase of risk—ample occasion for all the ills complained of as belonging especially to buds or grafts. Thus we have—

1. The subjects, endlessly diverse in habits and preferences as to soil, climate, culture, &c.

2. The operation, including time, manner, and results.

If these be taken into the account, we shall wonder not so much at the degeneracy as the endurance of our cultivated varieties. It is indeed maintained by some that what we have gained in one direction we have lost in another—that our choicest fruits, not only pomological but intellectual, have been dearly bought at a sacrifice of physical vigor—as saith the old proverb, “wiser and weaker;” a position not without considerable show of reason. But believing it opposed to the prevailing fact, as well as the hopeful theory, of “progress”—a progress not seeming and partial, but real, and, to some extent, proportionate—we must reject it while allowing, and otherwise explaining, the facts from which it springs. To say that culture and improvement pertain not to the entire range of human effort—as well to the physical as the intellectual—as well to the tree as the fruit—or to both as well as either alone—is manifestly absurd. We believe there are, in all directions, vast unexplored fields of profitable research and glorious accomplishment—untold stores of rich, new, noble inventives and prizes. At the same time it is evident that our efforts at cultivation and improvement have been, in many instances, partial, and in others, entirely misguided, producing certain baneful tendencies and results which are too obvious to be disregarded. These, whatever may be our theory, let each be sure to oppose and to the extent of his ability.

In discussing this subject, we shall endeavor to prove—

1. That the seedling is, *physically*, the more perfect tree. *Theoretically*, because of its unity and entireness, simplicity and naturalness throughout, in both origin and development, roots, top, growth, and product. Nature, in any given process, is perfect. *Practically*, because the wood of seedlings is firmer, bark tougher, and wounds made on them heal more readily; they are generally more productive and hardy, and accommodate themselves best to different soils and climates. Therefore—

2. Though grafting is indispensable, yet that grafting, other things being equal, will be best which employs most of the seedling stock.

These positions we shall not discuss separately or in regular order; nor is it, perhaps, necessary, for we doubt if any one conversant with the subject would feel inclined to question them. In fact the general impression, with regard at least to the hardihood of seedlings, has seemed to be that they were quite too tough, most unnecessarily and inconveniently thorny and rugged!

The ultimate issue no doubt is between seeds and buds—the rough, hardy product of the one, and the smooth, tender, rapid growth of the other—which affords the best foundation, or vital centers, to work from.

The seed is certainly nature's primal, chosen method of reproduction—the perfect embryo of a new, perfect individual—nothing second hand, or second rate, or fictitious, or adventitious about it. It is not one of many parts of a tree given to manufacture the rest, but all parts reduced, embodied, pledged to reproduce the whole. In examining the seed more closely, we find one part designed for the radicle, which is first developed; afterwards another, designed for the stem; and that these parts are utterly distinct—not interchangeable—a most significant fact. Each part, then, must remain by itself, each for its own element, and get each dependent on the other. And here at this point of union, if any where, is the life of the tree—the very seat of vitality—that common center from which all other parts radiate, and which, therefore, if any part, is indispensable.

That buds possess a species of vitality and are capable of indefinite, and, in some cases, profitable, extension or multiplication, is undeniable. Still it must be, from the very nature of things, an inferior, dependent process. There is no real re-production—no internal renewal of life, or vigor, or individuality,—but merely a sort of polypus-like increase, with, as I must think, a decided tendency, (at least among the more important varieties of fruit,) in every successive generation, to lose a portion of its original reproductive energy, unless that tendency be counteracted by working on strong seedling stocks.

The crowning effort of nature is reproduction. But man has interfered and diverted her energies from the formation of the most and best seeds to the production of fine flowers or fruits, making every other consideration secondary. The consequence is that some of our choicest fruits and flowers have almost no seeds, and are themselves few and feeble. Observe the wonderful productiveness of—we had almost said whatever is not cultivated—but compare the products of the original types of our fruits and flowers with those of the choice cultivated varieties, though none but the most productive are selected for propagation. No one can for a moment doubt that this seed-bearing propensity which thus underlies our whole system of horticultural production, is decidedly the strongest in seedlings; and, therefore, as we value the products of our trees, we should not lightly thrust aside their main prop.

Habit is (almost) everything; and if our trees, generation after generation, are to be worked from highly forced, root-grafted nursery trees, which are often little better than rooted cuttings, or more properly leaf buds, far removed from seedlings or fruit buds, we must not wonder if a habit of growing instead of bearing, there acquired and thus ingrained, predominate ever after. Like produces like; seedlings produce seeds, at least with whatever of fruit may be wrapped around them; while leaf buds, thus stereotyped, incline to produce leaf buds alone. Deeply conscious as I am of our horticultural inferiority here at the West, this lesson I must think we have learned by experience; if our Eastern friends have not, I would suggest that it might possibly be because their ancestors were not so well skilled in commercial gardening, especially the great art of root-grafting! Justice, however, requires the acknowledgement, in this connection, of our faults, if such they should prove to be. That root-grafting has ever been, as we believe, more generally practiced at the West than the East, at

we, (with everybody else a few years ago,) esteeming it highly, wrote so far as we know, one of the earliest articles upon it, descriptive and commendatory, ever published at the East. See *Horticulturist*, vol. 1, page 280.

But it is argued that "a tree is a tree"—that root-grafts are, if not the very best, at least "good enough"—that seedlings, as well as grafts, vary in hardihood or productiveness—and that the hardy or productive ones of either class are equally so, while the opposite, the one as well as the other, will go to the wall.

Suckers, too, we recollect, were once "just as good as any," and of some plants they still seem to be; and where from time immemorial they or cuttings have answered all purposes, we would not lightly call them in question. But for all that, discriminating cultivators cannot now be persuaded to trust many kinds of suckers, as they once did. Trees do unquestionably differ, on account of different modes of propagation; thus we have standards and dwarfs, seedlings and suckers, root-grafts and top-grafts, unlike in many and important particulars—not but that they may produce similar fruit, and, under similar and favorable circumstances, be much alike throughout—still there is a plain, practical distinction. So with the different parts of a tree, the roots and tops have utterly distinct functions; a root cannot become a branch, nor a branch a proper root. Thus a seedling varies from a sucker or cutting, especially in its root and collar, and unquestionably throughout. Hence the impropriety of thus confounding them, and of manufacturing entire trees, roots, stem, and branches, out of tops. Nature will doubtless do the best that can be done with them; but how can they make as natural trees as seedlings? The proper place to use tops is to make tops again—at least with the nobler fruits, so liable as they have become to untoward influences. Where so much is at stake,

Let foolish art and busy man withdraw
While Nature plants the corner stone.

Nor can the foundation be too rugged and enduring.

Trees differ in being of different varieties as well as classes. It is said there are sections where nearly all varieties are root-grafted, and with perfect success. In other sections, too, throughout the North and West, some varieties are generally recognized as too tender for root-grafting, and, in extreme cases, for any situation. For one, I do not know where these tender varieties do succeed so perfectly. In the very best apple districts in Western New York, we have seen (rarely, we admit, for we have never investigated particularly on this point, but we have seen) the same effects from root-grafting that are complained of elsewhere—in the nursery bursting, and in the orchard dying out at the collar,—while seedlings flourish almost everywhere; and every improved variety, without exception, in our experience, is rendered hardier and, if any thing more, productive, when worked standard high on hardy, productive seedlings. Is it not then the obvious dictate of sound policy to adhere inflexibly to the very best mode of propagation? Are we wise to take up with anything short? To strengthen a feeble grower, or renew stunted varieties, we have ever been wont to work them on the best seedling stocks; thus, by common consent, from time immemorial, acknowledging that with respect to vigor and hardihood the bottoms govern. Bottoms change

the tops greatly, and often for the better; while tops affect good bottoms, if at all, generally for the worse, except in the quality of the fruit.

I certainly would not deceive myself, nor raise any false alarm; but let us suppose, if not unreasonable, that throughout our country, when once well covered with these tender root-grafted trees, some right western winter should prevail. It may be (and it is certainly to be hoped) we shall have none more trying than that of '51 and '52.

Once more! Root-grafts cannot be better than top-grafts; still they are different, and what will that difference probably result in? It may not be possible, yet we have thought whether they may not eventually turn out like suckers, essentially inferior. *At all events on which side, we ask, is the risk?*

We would by no means ascribe perfection to seedlings; but we do insist that to them, as a class, we must look as much for endurance and productiveness, as to grafting, for choice fruit. No one can be more sensible than the writer of the advantages of root-grafting—especially to the nurserymen—of the cheapness, beauty, and popularity of that class of trees, and none will be more pleased to have it demonstrated that these advantages are not counterbalanced by any increase of risk. As a nurseryman, we have grown them mostly, and must do so while they are preferred. But there is, nevertheless, a class of stubborn facts we can explain in no other way than those above.

With our present views, between a seedling and a graft (of whatever style) of the same fruit, everything else being equal, we should prefer the former. But the truth of the whole matter, summed up, we believe to be this—that there are few seedlings but might be improved by grafting; and but few, if any, improved varieties but would be materially benefitted by working standard height on strong, healthy seedlings. There are some good fruits which produce the same, or nearly the same, from seed; and these it would be well to increase if only to save the trouble of grafting. If it be argued that they would not be as productive, it must be because natural progress toward the formation of perfect varieties is at an end, which we disbelieve.

We are no believer in the theory of the limited duration of varieties. Of the two we prefer Prof. TURNER's theory, as set forth in his famous essay on "The Vitality and Longevity of Trees," for which we think the horticultural world largely indebted to the author, as also for many other good things. Under favorable circumstances, we believe a given variety may endure through all time; but hardly, or to but little purpose, if subjected to all manner of abuses. And so with individuals; if we could have them live out their natural lease, we must be as choice of the body as the mind—of the tree as the fruit. Therefore, as nurserymen, if we would be on the safe side, let us always retain the strongest possible hold upon that inexhaustible storehouse of "vitality," that chief reliance, that staff of life in propagation—a good, sound seedling stock. Nor should we discard grafting; although, like civilization, while it has vastly increased the numbers and merits of its subjects and possessors, it has at the same time unquestionably multiplied their diseases and risks—not from necessity, but neglect—not to vex, but to improve—that, as our strength is, so might be our exertions and improvements.

EVERGREEN TREES.

BY WILLIAM BACON, RICHMOND, MASS.

"I don't like evergreens—they look so cold and gloomy in winter, and it is so mournful to hear the wind blow through them," is an expression, not so common as it once was, to be sure, but one yet quite too familiar to our ears. The facts in the case are, we are too apt to predicate opinions on first impressions, and if prejudice does not establish those opinions, too often in violation of reason and good taste, it is a fortunate circumstance.

Evergreen trees and shrubs do not attract particular attention in the season of deep and fresh verdure. The new-born foliage of spring spreads its fascinations over a large surface of forest and lawn, and with the variety of form and feature it presents, the eye and the mind find so wide a field of wonder and observation, that their researches stop, leaving such as have retained their foliage through the desolations of winter, unnoticed—almost unknown. To the careful observer, however—to him who seeks for beauty every where, and sees in every form to which Nature has lent her friendly touch in finishing—these evergreens present a beauty of foliage to which the deciduous trees of the forest can lay no claim. How richly their young and tender verdure contrast with that on the lithe twig which has stood and borne the vicissitudes of devastating winter! The Hemlock, long despised but coming to be justly admired for its symmetry of form, and light, feathery foliage, is a beautiful illustration of this variety of leaf, so closely joined as to give no interruption of foliage, and yet as distinctly marked as the termination of its branches. The Pines, the Fir, the Spruce, the Cedar, and, indeed, all our northern evergreens, possess the same peculiarities, though some of them, perhaps, in a less observable degree; yet what they may lack in this peculiarity of spring beauty, they make up in the richness of autumn; for when each leaf of the previous year has fulfilled its functions, and the new growth of leaves have attained their size and are fully prepared to enter on their life-preserving, life-giving labors, the old leaves turn to a pale yellow, and remain upon the branches a few days, until their last hold on the parent twig is broken, indicating the sallowness of death in contrast with the rich and healthful vigor of active life.

We have said, in a former article, that we admire all the trees of the forest. It would be very strange indeed, then, if we had not a peculiar fondness for those which present such marked difference of foliage in spring and autumn—and more especially if we did not greet their unchanging verdure with a smile of happy recognition, in the bare and desolating reign of winter.

Smile not, reader, if you find time and disposition to read these remarks. We see them, not to be gloomy appendages of earth, but rich and beautiful products, created to enliven and decorate the season of storms and tempests, and while reminding us of the blooming, verdant past, they give friendly assurance that Nature will again awake in freshness, and that her drapery of green will again embellish the earth with sights to feast the eye and make glad the heart.

It is but a few short years since any but the very few have thought of embellishing their grounds at all with evergreens; and, until recently, none but those from a distance have been permitted to take an adopted abode near the residence of man; we are pleased to see, however, in these latter days, a growing disposition to introduce them into pleasure grounds. If the same good taste would extend itself, and sprinkle them with other trees along our highways, the scenery would be improved by the increase of variety. One objection to this, however, must remain until men become sufficiently civilized to keep the streets clear of marauding quadrupeds. All animals have a stronger propensity to wage war on this class of trees than upon any other; consequently they are first to suffer from their warfare. Again, an evergreen tree cannot be perfect unless it grows in a conical form; Nature teaches this fact. Wherever they are found in open lands, or in their woodlands where their growth is unrestricted, their branches extend nearly or quite to the ground. Time does not deprive them of these lower branches. Nature probably demands them, to shelter their roots from the scorching suns of summer and the severe frosts of winter; beauty demands them, to give perfection to the exquisite models of Nature's workmanship. But plant them in our highways, with ever so much form of beauty, which would extend itself with each successive year, and how long would the tasteless, roving ruminants that infest our streets to the annoyance of all peaceable, progressive citizens, allow the destruction of this beauty to be incomplete?

But there are other purposes than those of mere beauty to which evergreens can, and eventually will, be applied. The utility of planting belts of them to protect exposed, bleak situations from the violence of winds, is a fact too firmly fixed to admit of a doubt. The only reason why many such belts are not planted each year, probably, is, that they will not afford the desired protection the coming winter—that a few years must pass after the work is done before the benefits can be fully realized; so, instead of setting about the work and shortening this time, we suffer delay to carry it further from us, until once, twice, three times the period is passed that would be necessary to realize the protection.

It was formerly supposed that more care was necessary in removing evergreens, than was usually bestowed on other trees of the forest. All trees should be removed and planted with the *utmost care*. As few roots should be broken, and as many of the spongioles retained as possible; and, acting upon this principle, we have no more reluctance in undertaking the removal of a Pine or a Fir than we have of an Elm or a Maple. The roots of some trees are more easily injured than are those of others, which, of course, makes greater caution necessary; but in removing Pines from low lands where the roots are easily retained, we have uniformly met with desirable success. In such lands, however, we have usually found them growing from bogs or the mossy covering of old logs, where the earth, by a little care, can at any time be retained around the roots, and the rootlets remain undisturbed throughout the whole operation; so that no delays in growth have been the consequence of removal. May is the month, which, in our experience, is most favorable for transplanting evergreens; and we have succeeded well in the operation until the new growth of three inches

had been made: at about the time of the bursting of the bud, however, we should consider the best time. In the matter of size, we would not be particular, further than in having an abundant supply of root for the trunk. This is more readily obtained to small than large trees, and, in most cases, ten years will give the tree planted when from three to five feet high a preference to the one planted when from ten to fifteen feet high.

In 1838 we found a beautiful tree, some fourteen feet high, blown over, so that the roots were in fine order for resetting. With an ample supply of help and great care we removed it. In 1840 we planted a tree six feet high about as many feet from it. A few days since we noticed the two trees growing so near together, in the same soil, and under equally favorable circumstances of location, and the low tree of 1840 overtops the high tree of 1838 by about six inches. The healthful appearance of the bark and foliage are superior in equal proportion.

THE PROPER SITUATION OF TREES ON LAWNS FROM ONE TO THREE ACRES IN EXTENT.

BY R. H. BURNHAM, LONG MEADOW, MASS.

I WILL start with the thesis that a place in the country designed as a residence the year round, is not complete if it does not embrace among its collection of trees many evergreens; not that I would have them more numerous than the deciduous trees; on the contrary, they should be in the minority. To those residing on the place they are, during winter, a source of much pleasure—particularly if judiciously grouped on the north side of the entrance road, (where they afford a delightful change of temperature to one driving in on a north windy day from the exposed public road,) and in an irregular belt running around the northern and exposed sides of the grounds. Planted in this way, they afford protection to more tender trees and shrubs—such as, among evergreens, the Irish and English Yew, Deodar, and Lebanon Cedars, Chili Pine, Mahonia, American Rosebay, Treebox, &c., &c. The place is also more attractive to the casual observer. The trees most desirable for the irregular belt and the closely planted groups, are the Hemlock, Arbor Vitæ, and Red Cedar. There is sufficient contrast in their habit of growth and color of foliage to give variety and character to the belt; and, if it is desired to prevent their spreading beyond a certain limit, the two first bear the shears perfectly well, and by judicious shortening-in, they will retain their natural irregularity of outline.

Planted singly on the lawn, there is nothing can equal the Norway Spruce, when allowed to throw out its branches close to the ground. The Hemlock is almost its equal in this situation; the Black or Double Spruce is a handsome tree, and the Swedish Juniper is a small, handsome tree of peculiar foliage; but the White or Single Spruce, and the Silver Fir, on account of their thinness of foliage as they grow old, should be discarded; the White Pine grows too large for any but large grounds.

Of evergreen shrubs, the Mahonia, with its Holly-like leaves, and its abundance of bright yellow blossoms, the American Rosebay, with its large fine pink flowers, and the common Laurel, [Kalmia, we suppose.—Ed.] whose beauty every one is acquainted with, are suitably placed by the side of the walks and on the outside of groups of trees.

I refer to the Hemlock again, not because it is the most useful for ornamental purposes, either single or grouped, but because it can be obtained, (not from woods, but from open ground where it has had the opportunity to develop itself,) of any size, which, to a person wishing to produce immediate effect, is worthy of consideration. I have moved the past six winters one hundred and ten Hemlocks, and an equal number of Spruces and Cedars of from twelve to twenty feet high, (by the frozen ball method,) and have lost but one, and that was owing to the excessive severity of the winter of 1852, at the time it was moved. This method (the frozen ball) of moving trees has often been described, but I differ from most by covering the ground where the trees are to be planted *in the fall*, to keep out the frost, and digging the holes when the trees to be placed in them are on the spot, and I can judge of the necessary size and depth, instead of digging the hole (as is usually recommended) in the fall, and then filling it with straw, and covering the dirt thrown out.

Tired of the trouble of the above method, I tried in the spring of 1852 the common way, and as soon as the frost was out of the ground removed eighteen Hemlocks with the utmost care, covering the roots with wet mats the moment they were dug up—taking them from similar soil to that where they were to stand, and mulching after they were planted. The result was, that ten of the eighteen died, and last winter I replaced them with trees moved with dirt frozen to the roots.

Of the deciduous trees enumerated in my last communication, the Mountain Ash, when placed in the neighborhood of evergreens, and covered with berries in winter, produces a pleasing effect. As to the Catalpa, though late in putting out its foliage in spring, yet it compensates this defect by the size of its leaves and beauty of its flowers; a few can be used to advantage singly and on the outside of groups. The Judas tree is pleasing, from its red buds put out early in spring, before the leaves appear; and the Purple-leaved Beech deserves a conspicuous place on the lawn for the peculiarity of its foliage; and placed in the neighborhood of the Sweedish Juniper and Irish Yew, the effect is striking from the unusual foliage and appearance of each. The Double-flowering Cherry, with its charming flowers, should have a place near the flower garden; or if the fruit orchards join the trees of the lawn, this, with the Double-flowering Apple, Double Plum, Weeping Cherry, &c., may be used to advantage to form the connecting link between the useful and ornamental parts of the grounds. The Osage Orange forms a handsome tree with its deep green glossy leaves, and is worthy a place, although late in coming forward in the spring. The still smaller trees, the Hawthorns, Buckthorns, White Lilacs, &c., &c., form handsome trees of sufficient height to shade walks, look well when standing alone or grouped together, and as they (especially the Buckthorn and Privet) grow well in the shade. They are particularly useful in close grouping with and under larger trees.

The shrubs which I enumerated (page 212 of the May No.) can be grouped by the

sides of the walks—producing intricacy by shutting out the view in advance, and of other walks near by—grouped the same as trees on the lawn, they produce variety by breaking up the view into pleasing openings, and they can be used as undergrowth among the larger trees. For the last named purpose, I have found the Privet (allowed to grow as a shrub) and the Missouri Currant perfectly well adapted. If there is on the place a few full grown trees, they may be covered to advantage with the American Ivy, Honeysuckle, and some of the Prairie Roses.

Instead of placing all the ornamental trees in front of the house, as is too often the case, some of the larger groups (particularly evergreens) should be placed at the back and sides, to give a background to the picture, and a pleasing effect to the house.

A FEW HINTS ON FARMERS' HOUSES.

BY WILLIAM H. SCOTT, ADRIAN, MICH.

It is a little strange that in this State not one farmer's yard in five hundred has more than half a dozen ornamental trees in it; and in the greater number there are no trees at all. The farmer who *ventures* upon the outlay of a few dollars in the purchase of well selected ornamental trees, and evergreens especially, is quite sure to find that at least every third passer points at them as something a little select—something, though very pretty, not exactly appropriate in the demesne of the man who gets his living by growing wheat or wool, or by making butter. Why not? Only because the thing has'nt its precedents among Michigan farmers. Even JOHNNY SLATTERN and BILL CARENOUGHT, untenanted as their minds are with any thing of a Georgic nature, wish that some of those pretty trees at whose beauties they give a passing look in their way through Town street or Suburban road on their way to market, were their own. But these men want the example of their own class. There are their neighbors BROADBRIM and LOANMONEY whose *farms* are the pink of neatness—their fields without a thistle or other noxious weed; their fences of the best; their wheat well drilled; their orchards trim and productive; their houses commodious enough; and, maybe, each keeps his carriage. *They* are the men to whom the neighboring farmers look for examples. Farmer BROADBRIM thought, when he "laid out" his "dooryard," that he had got it about right. Before he built, and when he lived in the log house, the "front fence" was a rail fence, and the "dooryard" was the whole farm that the house and barn did'nt cover. So, when the new house came to be built, in order to a greater certainty of metes and bounds—"a clear manifestation of visible things," CONSISTENCE BROADBRIM runs a bee-line from each front corner of his new-built house, whereupon shall stand, as well upon the street, a picket fence. His well kept farm has thus far engaged his whole attention, for from its proceeds he has had a large family to maintain; but now, as the farm is in good culture, and the children married and out of charge, he thinks he will decorate a little: hence that front yard within that picket fence. CONSISTENCE says that good REBECCA, the wife,

shall plant it. Thereupon she sets her wits to work for the most feasible and economical way of doing it. A neighbor's Blush Rose need the trimming, and she gets the offshoots. She remembers that her cousin PATIENCE GROWNRUSTY's yard, in town, has an old lilac bush whose uncared-for roots had thrown up a multitude of suckers: so, the first time she goes to town, some of them are got. With these and the "posy" bed on either side of the walk from door to front gate, the sum of her decorative art is well nigh exhausted. CONSISTENCE is an indulgent man, and looks quietly on all this transforming process in a way which reads unmistakably—"what's the use?"—"extravagant!" She has a want or two unsatisfied yet. Passing their friend BENJAMIN's well kept nursery on a fine spring morning, she would fain thin it a little for the good of her yard; but her good CONSISTENCE has been quite a long time making his money, and has no mind to spend much of it for "show." She is easily persuaded; though an *Elton* or a *Bartlett*, costing little more than one of the hundred apple trees in her husband's orchard, would have combined beauty and utility. The pretty Norways, Pines, and Spruces, that stand out so vividly in the nursery rows, and which, transplanted to their own door yard—small as it is—might add greatly to its beauty, as well as keep off the hard winter winds, fail to entice them. The little yard, with its rose and lilac bushes, and its two flower beds, has not the elements for growing better. It was "made" long ago.

Now, CONSISTENCE is but a type of a large class of farmers whose "strivings" to be tasteful are as uncertain as the flesh. What I especially wish to call attention to in his case is this: that possessing, as he does, quite his share of acres, he should so grudgingly "set off" (as though it were a dangerous associate of the rest of the farm) only that stingy little enclosure he designates "front yard." The few square rods of ground favored (?) by this exclusiveness, give a stiffness and prude air to the farm. The fence enclosing it draws attention to what should always be the best ornamented part of a farmer's grounds—the part which *all* members of the family, as well as passers, must look at the oftenest. The mistake made by CONSISTENCE involves a point in decoration in which nine in ten stumble in making their improvements: that *all fences not really required for purposes of division, should be studiously avoided either on village lot or farm.* A fence should be as much out of the vision as possible. With the greater number a "handsome fence" is of higher moment than the shrubs and trees surrounding the house, and too often answering the place of them. What more provoking than when passing a good collection of shrubbery in town yard to have your view of it cut off by a fence nearly twice as tall as there is any necessity of—a boardy barrier that the owner thrusts upon you as the greater beauty, but which you consider sheer snobbery. In villages there must be fences between the grounds of adjoining proprietors, if not neighbors in the true sense; but far prettier a neat fence of Osage Orange, Privet or Arbor Vitæ to mark the line. On the front, so long as the laws are not enforced against marauding cattle, carpentry must generally be used; but it should always be as low, light and open, as strength will permit. Much display in ornamental fencing is quite inadmissible about a farm house; more than in the town we expect trees, shrubs, and green vines, and grass to look at, and don't

so much need the plane and saw to make beauty. The greatest breach of good taste in a house yard on the farm, is stinginess of size—adopting as a *choice* in the country what is only a *necessity* in the city. Half an acre, or even an acre, no farmer should grudge for his yard; especially as no part of the farm can be made to pay better. The writer has found that two acres that he has mostly planted with forest and evergreen trees, made a better return of grass than twice the number of acres of meadow elsewhere. As breadth and magnitude, rather than elaborate decoration, belong to the farm, a horizontal fence is most appropriate to the yard. Picket fences, so common in front of farm houses, should never occupy that position. A horizontal ten foot rail, made of some hard wood free from knots, to connect the posts, makes a cheap, strong fence, obstructs the vision as little as any, and looks well.

A few words as to the selection of trees. I assume before making any list of ornamental trees for the decoration of the grounds of a well-to-do farmer, that he is not restricted in room. There is no necessity for crowding his trees too closely, as nine-tenths of lot owners in villages are sure to do; but, selecting his trees judiciously, he may give each its proportionate and necessary area, so that its distinguishing beauties shall be best brought out. Let the farmer devote two acres—at least one—to trees and lawn. On two acres he may get all our native forest trees, a complete collection of hardy evergreens, and besides, a good variety of the best pears and cherries. The pear and the cherry are the only fruit trees fit for the yard. From them, varieties may be selected combining the greatest excellence of fruit and all the beauties of form and thrift. The peach and the apple do not sufficiently combine beauty and utility to admit their presence nearer than the orchard.

It need not be objected that the portion of the ground devoted to forest trees is to yield its sole profit in the grass which may grow beneath them. Why not have your hickory nuts grown at home, instead of spending time and legs in roaming the woods or your neighbor's fields for them? And there is as much difference between such nuts as you might have by a proper choice, and the average of wood-grown nuts, as would amply compensate for the pains. How few trees equaling the Chestnut as a lawn tree, and how good the nuts! I saw young Chestnut trees last summer in the nursery of a friend, whose crop of fruit quite astonished me. The seed from which they sprung was planted at the same time with nursery apple trees growing near them. The latter had not commenced bearing. The Black Walnut, too, grows rapidly in the proper soil, and produces one of the best of nuts.

From the large variety of evergreens to be found in the nurseries, fifteen kinds will embrace all the *well-tried*—all that are certain to withstand the irregularity of northern winters without protection. Foremost among them, all things considered, may be placed the Norway Spruce, Hemlock, and Black Spruce. They are all beautiful specimens of tree architecture, and complete types of the two kinds of character in evergreens. Quite too little has been said in praise of the Black Spruce, owing partly to the fact that it has been little cultivated as yet. Its growth and size are about equal to the Norway Spruce; but it has a much denser foliage, and, with the Norway, the same association of color is attained as verdigris and French green afford.

Its depth of coloring sometimes gives it rather a sombre expression. To me that very dark green is especially pleasing in the melting days of summer. In the yard of Dr. D. B. SCOTT there are specimens, the tallest of which is, perhaps, thirty feet high, with a close, unbroken foliage. They have been universally admired by tree connoisseurs. Some specimens transplanted into my father's grounds in Toledo eight years ago—trees twenty years old from the seed—are almost always the most admired in a collection of ten or twelve evergreens. Beside them the much overrated Balsam Fir shows thin and lank. The Black Spruce has been sadly prejudged by those who have gone the wrong way to work to get it. Like the Hemlock, you greatly mistake its domesticated character by judging it from its appearance in the close forest, or by specimens taken from the forest. Like most evergreens, too, it must be a thin, slow growing tree for many years if transplanted from its native wilds; while, if taken from thrifty nursery collections, it is sufficiently thrifty, and grows thick and compact. Then there is the Red Cedar, a tree that no good collection should be without. It is often scrawny in its wild, native retreats; but it is not often so with good care in open culture.

GRAPES AND GRAPERIES.

BY C., MONTREAL, C. E.

IN looking over the December number of the *Horticulturist* (a work which I often re-peruse with increased interest), I notice the queries of "C., Chicago," regarding the failure of his grape vines. Having had some experience in growing grapes, I beg leave to inform the gentleman that his communication bears on the face of it the cause of his failure, namely, the deficient state of the vine border. It is certainly the first time I have heard of a border for grapes being constructed of "light, sandy peat," especially in a country like this, where the temperature ranges so high in summer, accompanied often with long periods of drouth. Whoever was wise enough to recommend such a process deserves a "diploma and a gold medal." It is a soil I would use for Rhododendrons or other "American" shrubs, but never for vines. I would advise "C." to remove entirely his present vine border, and substitute good loam of a heavy nature, rotted turf, and well rotted stable manure. Indeed, he cannot do better than follow the able editorial advice in answer to a correspondent contained on page 576 of the December number. It is there said that "stable manure should form the *chief fertilizing ingredient* in every vine border"—an opinion with which I perfectly concur. With regard to the drainage, another important item, I have used, with perhaps equal success, oyster shells, lime rubbish, or any similar substance containing nourishment, and at the same time answering for drainage. I would by all means advise "C." not to depend on the watering which his predecessor may have given the vines. I have had no experience in the shading of vines with canvass or any other material, as I never saw the necessity of using it in any country. I believe we have it here as hot in summer as at Chicago—the thermometer frequently ranging

as high as 100° and 105° in the shade, yet by means of ventilation I have always been able to keep the houses lower in temperature than the external atmosphere. I approve of C.'s system of pruning—the *spur* system is the best way of getting heavy crops. So accustomed am I to consider a thermometer a necessary appendage to every glass-house, that I am constrained to ask "C." if that useful little instrument is not to be had in Chicago?

I have been a reader of your delightful journal from the first, and although this is my first communication, I crave your permission to add a few more words. I have read with great interest the excellent practical remarks of Mr. MESSER, of Geneva, in the March number regarding the "*White Muscat of Alexandria*"; although I never saw glass sashes used for an outside border, the advantage of Mr. MESSER's plan will be at once obvious to every practical hand. I have often used hot manure for the same purpose, which I have also, at the same time, made subservient to the raising of cucumbers, melons, &c., by the aid of sashes. My opinion is, that the *White Muscat* is the *best flavored grape* I have ever tasted: DOWNING truly observes—"the most delicious of all grapes." I prefer it to the *Black Hamburg* for *flavor* when perfectly ripe, and Mr. M. seems to have had it in this condition, as his fruit had attained a yellowish color. It is a sort, however, which I would hardly recommend for a cold vinery, as it ripens late; much, however, would depend on the management of the border, which Mr. MESSER seems to have managed skillfully, when he has brought this delicious sort to such perfection without the aid of artificial heat. I may add, that some years since I saw the *White Muscat* and *Black Hamburg* tested by eminent judges at a Horticultural dinner, when the palm for flavor was awarded to the first mentioned; as to that world renowned sort, the *Black Hamburg*, there cannot be a doubt that it is the most profitable of all grapes, whether for a cold or heated vinery. Mr. DOWNING's description of the *White Muscat* is very correct, except with regard to its *thick* skin, in which particular I rather agree with Mr. MESSER in calling it a *thin* skinned grape. The *White Muscat* is always grown in England in forcing houses—the roots planted inside, but having free communication with the outside border. To prevent the roots extending too far, a stone wall is sometime built at a certain distance from the front wall of the house. It has often occurred to me that vine culture would be greatly simplified by forcibly confining the roots all inside the house, more especially when they are forced, so as to have root and top as near as possible at the same temperature.

There are a few other sorts of grapes which I would venture to recommend to American cultivators—such as the *Grizzly Frontignan*, and the *White Frontignan*. The *White Nice* is a pretty good grape, and yields large bunches. I lately saw the *Black Tripoli*, a superior sort, one of the bunches fully four pounds weight; but I believe it is rather a difficult kind to manage. I notice that Mr. DOWNING recommends, in his "*Fruits and Fruit Trees*," the *Black Saint Peter* as an excellent sort for a cold house. I think he must have been in error with regard to this variety, as, so far as my experience goes, confirmed by that of many other cultivators, I have found it to be a very difficult kind to bring to perfection without the aid of a high

temperature; at all events, I am sure it is not a sort fit to be grown in collection, and, indeed, there are several sorts which, to grow to complete perfection, would require each a house for itself. There are many other sorts of grapes which I have grown, but cannot do better than refer the amateur to the various excellent works which have been issued on the fruits of this country, where every necessary detail is given.

THE PEACH TREE IN 1852.

BY C. E. GOODRICH, UTICA, N. Y.

THE destruction of the peach tree this year was unusual in degree, and occasioned by an unusual cause. The hard frosts of December 27th previously had, apparently, destroyed the most of the fruit buds. The winter, though unusually cold, was favorable to the health of fruit by its great uniformity. Apple trees and healthful plums passed through it safely, while plum trees that had been injured during the summers of 1850-51 by the mildew of the leaf, (in consequence, I think, of hot, damp weather,) were killed.

On the 14th of April I passed through all my peach trees, and removed such trees as I have found uniformly yielded late and poor fruit. On that occasion I was pleasantly surprized at the healthful state of the wood and the proportion of fruit buds yet alive, especially those situated about the base of the limbs. Certainly, there had been no winter of the eight during which I had cultivated the peach, more congenial to its health. April 26th the temperature rose to 68°, there having been but two or three days as high as 54° previously. At this date I deemed my peach trees in a fairly hopeful condition, with the exception of the large loss of fruit already noticed.

April 27th to 30th, inclusive, were four bright days, with a brisk wind, which was cool except during the last of them. These four days were undoubtedly the turning point in the health of the peach. At the conclusion of them, much of the young wood was shrivelled and drying up, even to the eye, and much more to the test of the knife. The change was so sudden and extreme as to leave no room to doubt, even on the most cursory observation. The sun and wind combined seemed to have annihilated the sap of the young wood—the weather previously having been too cool to excite the roots to action.

Gooseberries were now slowly coming into leaf; pie-plant was partially expanding; peach, but especially cherry buds, were here and there swelling. May 1st there was rain copious enough to make the Mohawk overflow its banks. May 3d to 6th were four frosty nights. From the 6th to the 9th, inclusive, were four hot days—the temperature on the 7th reaching 82°, and on the 8th it was probably as high, though the indication was not reached. The peach broke into flower slowly and irregularly from the 15th to the 22d, when it was about in full flower. This was just ten days later than usual, it ordinarily being in full flower on the 12th. While these were coming into flower they encountered three Novemberry days from the 18th to the 20th, which

resulted in frost on the morning of the 21st. By this time it was evident that of some five hundred trees that had exhibited apparently fair health less than one month before, full one-half were substantially ruined—some being dead (as the result soon after showed), root and branch, others killed to the ground merely, and others still having here and there a live limb. The remaining half were injured less in various degrees. Soon after flowering there was a considerable development of the "curled leaf" malady, though I think it was less than in 1851. This attack was to have been expected, if the principles laid down in an article in your paper for February, 1851, were correct, the general character of the weather in the two cases having been very similar. It deserves to be noticed that trees that stood in the grass, and so had made less succulent wood the preceding year, were less injured. I have read in your paper general statements of the extensive death of the peach during the last severe winter. It would be gratifying to know whether this destruction was occasioned by an influence acting strictly during the winter, or whether, as in my own experience, it was, more properly, the influence of an irregular spring. I closed my articles one year ago, when writing on the "curled leaf," in a tone of considerable confidence in the possibility of cultivating the peach somewhat successfully, even in Oneida county; but the experience of 1852 is, I acknowledge, not a little discouraging. Others about me, with a few trees, on a heavier and less excitable soil, have suffered less than myself. A tree of mine, also, that is budded on a plum root, has been vigorous. But it is sufficiently obvious that, in a climate with such liabilities, the cultivation of the peach must ever be precarious.



Foreign Notices.

BOTANICAL AFFINITY OF THE CEDAR OF LEBANON AND THE DEODAR.—The following article will be read with interest by the many admirers of the famous Deodar Cedar. It has frequently struck us as an important quality of this tree to "sport" when raised from seed. The *robusta* and *viridis* are two quite distinct varieties—the first distinguished by its vigorous habit, and the other by its deep green color. There is likely to be an endless variety among seedlings, which may be, in some respects, regretted, while in others it will add to its interest.

"When the Deodar was first raised from seed in this country, the graceful weeping habit of its branches, their glaucous hue and long tender shoots presented an aspect so different from the ordinary appearance of seedling Cedars, that no one, we believe, who observed the two trees growing together, doubted their distinctness. Systematic botanists have, however, all along, found a difficulty in pointing out tangible characters to distinguish them; and travelers who had seen the trees in their native places of growth have, from time to time, reported that they are both liable to a very great amount of variation, and that both vary in the same way. If to this we add that among the myriads of Deodars which are now yearly raised in this country, many varieties are already beginning to appear, some of which are much nearer the Cedar than the original state, it will not appear surprising that an opinion should have arisen among botanists, which begins to gain ground even among cultivators, that the two trees are not specifically distinct.

"It is in all cases a matter of considerable difficulty to decide whether or not two closely allied forms are identical or distinct. Accurate observation of the plants in their native places of growth, during all stages of their existence, is the only unerring guide in such a case, and where that is impossible a careful examination and comparison of extensive suites of specimens in all states can alone enable a botanist to decide on the identity or distinctness of two such forms. The difficulty of solving such a question, always great, is considerably enhanced when large trees form the subject of comparison, and is, perhaps, greatest of all with cultivated trees which, being placed in circumstances different from those in which they naturally grow, have a tendency to assume appearances different from those which are characteristic of the species. The question, indeed, is one in which the cultivator is as much or more concerned than the mere botanist, and it is one which the observant and philosophic cultivator is peculiarly qualified to answer, as from his acquaintance with the extent to which plants raised from seed are liable to vary, he is better than any other person able to decide what amount of variation may exist without specific difference.

"That the Cedar and Deodar are very closely allied to one another no one doubts. Both belong to the same section of the Pine tribe, characterised by solitary persistent leaves and erect cones. The male flowers in both are absolutely the same, and small branchlets of the two are in the herbarium almost undistinguishable—the mode of branching, insertion of the leaves, and color of bark being quite the same. The cones in both vary a good deal in shape, but the scales and broad-winged seeds are the same in both species. A difference in the shape of the scales, indicated by ENDLICH, seems to have no real existence, or rather to depend on the age of the cone before maturity the scales are closely pressed together and bent upwards, but as the seed they spread out and become straight or even reflexed before they fall away from the persistent

"The only points of distinction, then, which can be discovered between the Deodar and

Cedar of Lebanon, are the generally greater length of the leaves of the latter, and a considerable difference of habit. This difference of general aspect will, we believe, be found to be the ground on which most observers rest their belief of the distinctness of the two trees. But though variations in this respect may be admitted as a *prima facie* indication that specific differences exist, yet they are in themselves no proof of such difference; and if a minute comparison of two supposed species fails to show any peculiarities of structure, mere size of parts and mode of growth cannot of themselves make two plants distinct. We all know how variable our forest trees are in these points; coniferous trees, indeed, to a greater extent than most others; and it would be within every one's experience that the Deodar is one of the most variable of a variable tribe. This may be well seen in any extensive plantation of Deodars, and any one may satisfy himself that it is the case by a visit to the fine avenue of these trees in Kew Gardens, in which may be seen many trees which are quite intermediate between the original state of the Deodar and the common Cedar, and one or two, which both in mode of growth and in rigidity and size of leaves, are almost identical with the Cedar of Lebanon. As permanency is the only test that can be applied to estimate the value of distinguishing characters, the occurrence of these intermediates forms the strongest argument against the distinctness of the two species; and if future observations should show a still further approximation of characters, what is now only probable will become a matter of certainty. It is, however, a very curious fact that the Cedar is in this country much less liable to vary than the Deodar; and it has been suggested to us by a practical gardener of great experience, that the explanation of this may be found in the fact that all our Cedars descend from one common stock, or, at least, are derived from the same district in Lebanon, while the seeds of the Deodar are collected from widely distant parts of the great Himalayan chain.

"Indian travelers unanimously testify that the Deodar is one of the most variable trees in its native country. Though probably confined entirely to the western and drier Himalaya, and not being known to occur in a wild state in any part of the chain east of the Ganges, it has a wide range in altitude, growing equally in warm and sheltered valleys as low as 5,000 feet, and on exposed slopes at a height of 12,000 feet, where, notwithstanding the elevation, the warm dry summer enables it to ripen its wood sufficiently to resist the intense cold of winter. In its native forests, we are assured that the Deodar is a tall conical tree, rising to a height of 100 to 150 feet, and sending out horizontal branches in all directions; or at times dividing close to the base into two or three trunks, which ascend parallel to one another to a great height. It is, however, also common in a state of cultivation, being generally planted near temples in the province of Kumaon, in which it is nowhere indigenous. There, probably, from its isolated mode of growth, as the same thing is observed wherever trees grow in exposed situations, it has a quite different shape. Low and flat-topped it rises to no great height, but sends out long straight branches, which bend downwards and often sweep the ground. The Cedar of Lebanon is also well known to us from the accounts of travelers, who have observed it in its native forests, and from their descriptions we learn that it is there often a very different tree from that familiar to us in this country, being tall and straight, with horizontal branches, forming a beautiful cone.

"The peculiar glaucous hue so characteristic of the earliest imported Deodars is not only not constant in the species, being absent in many of the varieties which have already arisen in this country, and unquestionably not present in adult trees in a wild state, but it occurs in some states of the Cedar. It cannot, therefore, though it forms the most striking distinguishing mark by which the Deodar is ordinarily recognised, be regarded as anything more than a very striking instance of the amount of variation to which species are subject, unless we assume what no one, we think, would be inclined to do, that the true Cedar, as well as the Deodar, is a native of the mountains of northern India.

"We have purposely abstained from taking into consideration the geographical distribution of the two trees, as any argument founded on it would be inconclusive. It may, however, be noticed as corroborative of the view which we have been led to adopt, that the Deodar in India is exclusively confined to the western part of the Himalayan chain, and is especially abundant in the mountains of Kashmir, and that it extends thence into the mountains of Afghanistan. The hilly districts of eastern Persia are not, it would appear, sufficiently elevated for coniferous vegetation, nor is there at present any reason to suppose that any species of Cedar exists in

northern Persia, where there are very lofty mountain chains. Still our knowledge of that country and of Armenia and Caucasus, is too limited to warrant our asserting that the Cedar does not grow there, while in Taurus we know that the Cedar of Lebanon is indigenous.

"It ought also to be borne in mind that among the trees which accompany the Deodar in northern India, there is a considerable number of European species. The Yew is plentiful in all parts of the Himalaya, and the common Juniper, though more Alpine, has nearly as wide a range. The tree Juniper of India, too (*J. excelsa*), extends into western Asia, so that at least three species of Conifers are common to that and the Himalaya. The Walnut, which is one of the commonest forest trees all along the chain of northern India, is also indigenous in the Caucasian provinces, and a species of Oak extends from Spain, through western Asia, Persia, and Afghanistan, into the drier parts of the western Himalaya. The common Berberry may be cited as another instance of the extension of European species far East, and the list of trees and shrubs might, if space permitted, be considerably increased, while the number of herbaceous plants which are common to Europe and the mountains of India is very great."—*T. T. in Gardeners' Chronicle*.

[This very able statement of the botanical arguments that may be employed to show the identity of the Deodar and Cedar of Lebanon as species, has been communicated to us by an experienced Indian friend, well acquainted with the former tree on its native mountains. The arguments that a botanist can produce in support of the opinion that the Cedar of Lebanon and the Deodar are varieties of one common species have been ably stated by our correspondent, who has, indeed, exhausted the subject in the form in which he has put it. But here, as in so many other cases, the question resolves itself into one of words. If it is maintained that these trees have descended from one common stock, in the lapse of ages, and are therefore specifically the same, we have nothing to object. The negro and the white, the game cock and the jungle fowl, the lapdog and the bloodhound—the dog himself, indeed, and the wolf—have all, in turn, been pronounced by competent authority to be of identical origin; and we are very far from questioning the soundness of such opinions. The same kind of reasoning which justifies such conclusions would undoubtedly lead irresistibly to the inference that the *Scotch Rose*, the *Dog Rose*, and the *Galic Rose*, nay, even the *China Rose* itself, have a common origin; for are they not traceable the one into the other by insensible gradations and innumerable intermediate forms?

But although a wolf may be specifically the same as a Maltese spaniel, no one would, we imagine, feel inclined to confound the two, or to consider them strictly allied, except from a theoretical point of view. Such, we conceive, is the manner in which the Deodar question must be practically considered. Botanists may trace unsuspected resemblances; the differences by which the plants are popularly separated may be shown to be trifling and unimportant in the eye of pure science, but the fact remains that great differences do exist; and if they are permanent in a general sense, then the distinction of the two is unaffected. Let us see what counter-proofs can be produced in support of the essential (we will not say specific) differences of these two trees.

In the first place it is to be observed, that if the Cedar of Lebanon and the Deodar are sown in mixture, the seedlings are unmistakeably different. One is green, stiff, and erect; the other is glaucous and drooping. No one, we believe, ever saw a Cedar of Lebanon with its seedling stem turned downwards; no one a Deodar in any other state. This, then, is not a mere difference of color, but of physical constitution. The two are as distinct, *ad incunabiles*, as negro and Caucasian infants.

In advanced age, the difference is preserved; the Cedar of Lebanon may become glaucous, but it does not droop; the Deodar may become green, but it will not straighten its leader; the one is always stiff and massive, the other light and graceful.

According to Dr. ROYLE, the wood of the Deodar is particularly valued for its durability; and Major MADDEN quotes Baron CHARLES HUGEL as one of those who eulogise "the incorruptible Himalayan Cedar, the invaluable Deodar." Without insisting too much upon these expressions, it is fair to remark that they are in no way applicable to the timber of the Cedar of Lebanon, which is soft and of little value in this country; Major MADDEN says that even on its native mountains it affords timber, little if at all superior to the coarse, soft, warping wood of English specimens. POCOCKE, who saw the Cedars on Lebanon itself in 1744-5, asserts that their wood

does not differ from White Deal in appearance, and is not harder. The specific gravity of Deodar wood is reported to be 680, while that of Cedar of Lebanon is 618 (MADDER).

If we look to the fructification, another striking difference is apparent. In form the cones are no doubt similar; but those of the Cedar of Lebanon never separate the scales spontaneously, as far as we have observed, while the cones of the Deodar as constantly fall to pieces.

Such differences then, existing between these trees, we are unable to acquiesce in their union under one specific name. That they are extremely unlike is admitted on all hands. The precise value of their differences is just as indeterminable as the word species is undefinable, and that point will probably be settled about the time when the circle shall have been squared.

On Atlas is found a third Cedar, now called in our gardens the Silver Cedar, by some botanists *Cedrus Atlantica*. That plant, indeed, differs from the Cedar of Lebanon in little except color, in which particular it resembles the Deodar. All that can be ascertained from an examination of detached fragments is, that its cones are not above half the size of a Cedar of Lebanon. Nevertheless, M. DECAMER, one of the most experienced and judicious of French botanists, has just pronounced in favor of its being also a distinct species. We quote his words:

"M. P. JAMIN, director of the nursery at Biskara, to whom I had applied for information concerning the Atlas Cedars, writes, under date of December 17, 1852, that he has just returned from a journey of eighteen days to Batna, Lambessa, and the Peak of Toumour, taken for the express purpose of obtaining information concerning the tree, and that he visited carefully the latter locality in company with the keeper of the forests. He there found two species of Cedar. The peak on which they grow is about 1800 yards above the sandy soil which borders it; the more remarkable plants found at the foot of the mountain by M. JAMIN were, as might have been anticipated, Mediterranean species.

"Cedars began to appear at three-quarters up the slope of Toumour, where they produce a magnificent effect, and form a thick forest up to the very summit of the peak. It is not uncommon to find specimens forty yards high and one and a half yard in diameter at the butt. The two species live together, but they are distinguished at first sight. The Silver Cedar was covered with ripe cones; on that of Lebanon they were more behind, and flowers were still visible on some of the branches. The habit of the Silver Cedar is that of the Silver Fir—it is pyramidal, and its foliage is silvery; while that of the Cedar of Lebanon is dark green, and its branches horizontal, as we all knew. The number of trees is estimated at 20,000; the finest are on the northern face of the peak. M. JAMIN saw many dead of old age, or struck by lightning. While he was writing the ground was covered two yards deep with snow; nevertheless *Asphodelus albus* and *luteus*, *Ranunculus flabellatus*, Violets, and a *Retama* (*Spartium monospermum*), were already in flower in sheltered places."

Thus, adds M. DECAMER, horticulture is finally proved to have gained a new species, notwithstanding the doubts that have been expressed concerning it.—*Gardener's Chronicle*.

DISEASE OF THE GRAPE IN EUROPE.—The accompanying accounts are translations from the French, which describe a new disease of the Vine in Europe, and gives the remedies which have been successfully employed in arresting its progress. I take pleasure in sending you these translations, which will, I hope, prepare our vine growers to meet this disease, in case it should cross the ocean. THOS. W. LUDLOW, JR.—*Yonkers, N. Y.*

"We read in the *Observer*, of Athens: An epidemic of a peculiar character has attacked all the vineyards of Corinth Grape throughout Greece. This disease, entirely unknown until now in this country (Greece), consists in a kind of glutinous matter, which covers all the bunches by degrees, giving them, at first, the color of ashes; but at the end of ten days, it dries them up, causing the berry, and sometimes even the bunch itself, to fall. From the latest accounts, the disease has, in many places, attacked other vines, and even trees.

"According to the best estimates, there is danger that two-thirds of the ordinary crop of the Corinth Grape, is destroyed. In several localities, the whole of the crop is lost.

"It has been observed that young plantations are less liable to disease than the old ones. The government, justly alarmed at the serious consequences which this unexpected misfortune may produce, has taken measures to have the disease investigated, in order to discover means of alleviating the evil, or arresting its progress, and to relieve cultivators and proprietors. A commission of men skilled in agricultural science has been sent to different places.

"It is true, that for the last few days the disease has been checked, but nothing induces us to admit that it has reached its period, or that we shall not have to deplore still greater ravages.

"The injury which the loss of the *Corinth* Grape crop may inflict on this country will be immense, when we reflect that the whole of the crop is exported, and that it produces an annual sum of from six to seven millions of francs."—*Agricultural Echo*, July 27, 1852.

"The fear created by a temporary affection which is called a disease of the vine, although in our opinion exaggerated, renders it a duty to publish the different means which have been tried to prevent or arrest it. We have already published the method communicated by M. HÉRUZÉ to the Society of Agriculture in the *Echo* of July 15th. We now give the following note of M. MEZZA, apothecary and member of the Agricultural Society of Lyons, addressed to the Academy of Science:

"Since the appearance of this disease in the vine, I have studied its cause, its nature, and its progress. Numerous experiments have convinced me that it does not exist in the plant itself, but is developed under certain atmospheric conditions. This is the general opinion of those who have studied the disease from the beginning. I agree with them, that the white powder which covers the fruit, the bunch, and the branch, is a fungus which fixes itself upon the plant as the *Puccinia de la gale* attaches itself to animals, and ends by injuring it in a most grievous manner. With this view I have used a sulphate of protoxide of iron (green vitriol), dissolved in water, in the proportion of 250 grammes* of sulphate to 15 or 20 pounds of water, and I will publish the results:

"Lotions of ammonia used from the beginning of the Oidium have succeeded very well; but the effects are not certain as those of the sulphate of iron. Carbonate of sulphur, dissolved in water, appears to produce good results. Having begun this experiment only two or three days ago, I cannot, as yet, speak of it with certainty.

"The following method comes from PIEDMONT, and is entirely different from any heretofore recommended. The facts are not disputed, and if this treatment has caused the disease to disappear, it is all that can be asked; but without repeated proofs we shall find it difficult to believe in this Piedmontese remedy:

"Since the appearance of the disease of the vine, says the correspondent of beyond the Alps, M. JOSEPH ANTOINE GUIDA, a very skillful agriculturist and administrator of the domain of Dulzago (PIEDMONT), belonging to the family of the Counts BORZONZO, has directed his attention to this object. A constant study of the evil has led him to believe that the disease of the vine is due to an obstruction of the sap (humeurs). Starting his system of cure from this view, he made an incision at the foot of each vine, a short distance from the ground, of such a depth as not to endanger the vitality of the plant. The effect surpassed his expectations, and, after eight days of experiment, he was able to decide upon the efficacy of the treatment. If the disease had just begun, or had made considerable progress, in either case, the effect of the sulphate of iron was certain and evident in twenty-four hours. The black marks, covered with a white powder, disappeared entirely; the berry recovered its green color with the gloss, which is so strong an evidence of health; the berries which had burst healed over, and their growth proceeded, notwithstanding the scar. If the disease continues, the watering may be repeated without risk. This treatment is easy and cheap. Sulphate of iron costs about twenty-eight centimes per kilogramme,† and one kilogramme is enough for four or five acres. The action is rapid—we may almost say instantaneous. None of the puffed up published methods have this advantage. For the sake of our wine growing districts it is to be wished that this remedy should be employed as soon as possible, for in many localities the disease is making frightful progress.

* One gramme is nearly fifteen and a half grains.

† Kilogramme—Two pounds five drams and a half.

"I incline to the opinion that sulphate of iron might be used with advantage for the potato. It will be necessary to lay the potatoes for two or three days in a solution of iron before putting them in the ground. I have just watered with this liquid some potato plants attacked with the rot.

"Mr. DENIS ROVIDA, lawyer of Novara, a witness of the experiment, observed, that in those vines where the issue was abundant, the disease had disappeared as by enchantment. Grapes, which some days before had been severely attacked, had resumed their beauty and their vigor."

"It is worthy of remark that the intensity of the disease was always in proportion to the greater or less abundance of the issues. Wherever they flowed freely, the disease had disappeared: on the contrary, where the discharge was feeble, the scourge had continued to leave its mark. These significant symptoms may furnish a key to a system of cure which may possibly be extended to a large number of those plants which are attacked by a disease of an obstinate character.—*Agricultural Echo*, August 10, 1852.

LONICERA FRAGRANTISSIMA. — A sub-evergreen hardy shrub. Flowers whitish, very sweet-scented. Native of China. Belongs to *Caprifolia*. Introduced by the Horticultural Society.

This is one of the plants obtained from China by Mr. FORTUNE, while in the service of the Horticultural Society, but has not flowered in the Chiswick Garden, where it has been merely known as a perfectly hardy "*Caprifolium*." In January last it blossomed in the garden of the Marquis of Salisbury, at Hatfield, whence Mr. WILLIAM INGRAM, the gardener there, sent us specimens, with the following note, on the 13th April:—

"The plant which affords me these flowers has been in bloom since January. It occupies an east wall, and has enjoyed no particular advantages of soil or treatment. The flowers appear with the earliest development of the leaves; and although not large or otherwise striking in appearance, compensate for any deficiency by their exceeding fragrance, combining the richness of the perfume of orange blossoms with the delicious sweetness of the honeysuckle."

Its evergreen foliage distinguishes it from all the previously known species of the *Chamæcerasus* division of the genus.



LONICERA FRAGRANTISSIMA.

Editor's Table.

THE SPRING FLOWER GARDEN.—The spring flowers are always the most welcome. How pleasant the sight of brilliant beds of the Crocus and Snow Drop early in April, giving us assurance that dreary winter is over. Then close upon them, May brings us Hyacinths, with their delicate and beautiful hues and fragrance that fills the air. With them we have the gaudy Crown Imperials and the more humble variety of Frittilaria, with the Narcissus, the Pansies, Violets, and Polyanthus, and early Tulips. These all we have enjoyed before the trees have ventured to put forth a leaf or blossom. All these charming spring flowers we have named are of the easiest cultivation, and may decorate every garden large or small at a cost so trifling as to be within the reach of all. But they are sadly neglected; not because people do not admire them, or desire to have them, but because they forget to make timely preparation for them. How common it is for people to go about planting them just at the moment when they are coming into blossom, or quite as likely in full bloom. They are told, "this is not the time;" "well," the reply is, "if we do not plant now we shall *never*, for we forget them at the proper time." Now let us remind those who have been admiring their neighbor's gay spring flower garden, to make note of it at once, that next September and October they may provide for the spring of 1854.

The Hyacinth is the queen of all spring flowers, and deserves not only for this, but for the ease with which it is bloomed in the house during winter, to be an especial favorite with every lover of flowers. It is not a plant that demands years of care and culture before it yields a return; for if planted in autumn, next April or May shows all its beauty in the highest perfection. We have made note of a few good varieties that beginners may do well to remember:

Single red varieties: *Diebits Sabal Kanakie*, the most brilliant of all the reds; *Mars*, next to it; *Unique*, a distinct purple red—very fine; *Madame Ventenon*; *Felicitus*; and *Johanna Christina*.

Single blue varieties: *William I.*, very dark, almost black; *Lord Nelson*, also very dark; *Procelain Scepter*, very light and beautiful; *Staat General*, azure; *Franklin*, light; *Grand Vedette*, light; and *Blucher*, dark.

Single white varieties: *Grand Monarque*, *Helena*, *Vesta*, *Voltaire*, *Grand Blanche*, *Hercules*, and *Victoria Regia*.

All the above force exceedingly well.

Double red varieties: *Boquet Royal*, *Eindracht*, *Perruque Royal*, *Panorama*.

Double blue varieties: *La Majestueuse*, *Princes Saxe Weimar*, *Dryshoot*, and *Lord Wellington*.

Double white varieties: *A la mode*, *La tour d' Auvergne*, *Prince of Waterloo*, and *Anna Maria*.

FINE EARLY SPRING FLOWERING SHRUBS.—Among shrubs that make an early display on the lawn, we must call especial attention of young planters to the following, while their impressions are fresh on our minds. 1. The well known Japan Quince (*Pyrus Japonica*),

with its brilliant blood-red flowers. 2. The Deep Green Forsythia, with its clear yellow flowers. 3. The Crimson Currant (*Ribes sanguinea*). 4. The Gordon's Currant (*Ribes Gordoni*), crimson and yellow. 5. The Ashberry (*Mahonia aquifolia*, evergreen), with its bright yellow blossoms. 6. The Rose-colored Wiegela (*W. rosea*), with delicate rose-colored blossoms. We may add to these the Double-flowering Spiraea (*S. prunifolia* fl. pl.), as it follows them closely; has small double flowers. These form a beautiful collection for the early spring, all perfectly hardy and flourishing without any particular care or treatment. The Mahonia we must single out because it is not yet much planted, and is very desirable. It is evergreen, bearing the winter well, the best substitute we have for Rhododendrons; then it blooms so early and so profusely; it is low and spreading, and makes a rich mass of foliage on the lawn.

BLACK WARTS ON PLUM TREES, AND THE INSECT "MEMBRACIS BUBALUS."—As every thing relating to this destructive affection of our plum trees is important, I have taken the liberty to enclose you a letter from Prof. HARRIS on the subject of the insect named, and also a twig punctured by the insect, furnished me by GEORGE CLARKE, Esq., of Springfield, Otsego county. Mr. CLARKE and his gardener have observed the attacks of the insect, as he informs me, for several seasons; and whenever he has left the twigs with the puncture upon them, the black warts have appeared the second season after the attack; but when he has removed the puncture carefully which contains the eggs, he says the limbs have not been affected. I give this, that examinations may be made, as suggested by Prof. HARRIS, in the hope that something may be elicited on the subject that may be useful.

Perhaps I should further state that Mr. CLARKE is of opinion that the black color of the surface of the warts is occasioned, as noted by Prof. HARRIS, by the black fungi alluded to, but that the first cause of this excrecence arises from the deposit made by the insect. By examining the twig sent you, you will find the eggs deposited, as described by Prof. H. B. P. JOHNSON, Albany, N. Y.

B. P. JOHNSON, Esq.—*Dear Sir:* I have examined the punctured twigs and the insects which you sent to me with much interest. The insects are tree-hoppers, and the scientific name of them is *Membracis bubalus*, so called by FABRICIUS, the first describer of this species. You will find an account of the tree-hoppers, and an allusion to this species, in the second edition of my Treatise, p. 192. It is one of the kinds whose history has not hitherto been particularly investigated, and of which it is stated in my work, that "the habits of some of the tree-hoppers are presumed to be much the same as those of the musical harvest flies; for they are found on the limbs of trees, where they deposit their eggs, only during the adult state, and probably pass the early period of their existence under ground."

This little tree-hopper, it appears by the specimens sent, punctures the twig of the cherry and of the plum tree. This operation is performed by a piercer, which is lodged in a groove beneath the tail of the insect. The puncture begins with a small longitudinal incision through the outer bark of the twig, and is carried obliquely through the inner bark to the wood. In this wound the insect deposits its eggs, pushing them beneath the bark on each side of the incision. The eggs are very minute, of a white color, and long oval shape, and strikingly resemble those of the *Cicada*, except in being much smaller. The eggs appear to remain unhatched through the winter. On being hatched in the spring, or in the early part of the summer, the young probably, like the young of the *Cicada*, drop or descend to the ground, burrow beneath the surface, and live there upon the sap of the roots of plants, which they imbibe by suction through their sucking tubes. Like the *Cicada*, too, when they have come to their growth and are ready for their transformation to the winged form, they probably come forth from the ground, ascend the stem of some plant, cast their skins, and appear in the adult or perfect condition, in which they are prepared to continue their kind.

Whether these insects have any connexion or concern with the production of the warts on the cherry and on the plum tree, is a question of considerable importance. Your friend GEORGE CLARKE, Esq., who furnished you with the specimens sent to me, has satisfied himself, you say, that the warts originate from the punctures of these insects. Having watched the operations of the latter for three years past, he has found the warts to appear on the wounded twigs; and has found, also, that, when the wounded part was cut out, the production of warts was prevented. Since the receipt of your specimens, I have examined (not very thoroughly indeed) my plum trees, which have always had some warts on them every summer; but I do not discover any incision of the *Membracis* upon the twigs. This examination, however, is not to be considered as a sufficient or satisfactory test. My trees have been very severely pruned and shortened on the first appearance of the warts, and in this way have been kept free from the unsightly excrescences with which other trees are disfigured. I can detect the wart in its incipient stage, before even the delicate outer skin of the twig is broken by the tumid condition of the bark, and then apply the knife freely, and put fine salt or strong brine upon the wound. I propose this spring to wash over all the limbs and twigs of my plum trees with strong soft soap, in order to ascertain whether alkali will prevent the production of the wart—be their cause what it may. Before this is done, however, I will examine the trees again more carefully, and if any incisions of the *Membracis* are found, will mark the spot by tying around it loosely a piece of yarn—will then leave it untouched by the soap, and watch the result. I hope other persons may be induced to make the same experiment.

I should observe that *Membracis bubalus* is not an uncommon insect here, and that it may be found by a careful collector almost every summer. Yours, &c.,
 THADDEUS WM. HARRIS.
 Cambridge, Mass., March 28, 1858.

P. S.—You will find by my Treatise, page 70, that the black color of the surface of the warts on the plum tree is occasioned by numerous little black spherical fungi, which give to the wart a granulated appearance. The constant occurrence of these fungi on the surface of the warts, and upon nothing else, and the invariable death of the warts when the fungi have come to maturity and have shed their spores (or seeds), are of much significance in connection with the origin and history of this peculiar affection.

T. W. H.

We are greatly obliged to Col. JOHNSON for the information he has communicated. Whether or no the "*Membracis*" produces the plum tree warts, it is well that attention should be called to it, that the precise nature of its depredations be understood.

The three great draw backs in fruit culture in America are the *pear blight*, the *curculio* and the *Plum tree warts*. These subjects merit thorough and ceaseless experiment and investigation.

NOTES BY A MICHIGAN CORRESPONDENT.—I notice your Baldwinsville correspondent's inquiry regarding cocoons on the apple tree. I have frequently detected them in my orchard here, but had not detected the moth. So far as I can ascertain, they are, in common with at least two other apple tree insects which abound here, perfectly harmless. One of these is a minute black-winged fly, not unlike a very small wasp or female ant, which lays clusters of shining black eggs—two to three dozen together—under the loose bark. The eggs are exceedingly abundant, but the fly appears to be scarce. In its winged condition, it probably has another habitat, but I have detected it laying its eggs in the fall. These latter, under a good microscope, are very beautiful, being of the deepest black with the very highest polish. Does it exist with you? If it does, you cannot fail, when cleaning your trees in the spring, to have seen the eggs.

There is another insect, of whose harmlessness I am not so confident. I believe it to be an *aphis*, but have never met with any description of it. It is a clumsy, soft, bed-bug-looking creature, about the size of this familiar pest, of a dark greyish-green, regularly striated across the

back. I find it only on the trunk and larger limbs of apple trees when the first warm weather commences, and it does not, so far as I have observed, remain longer than three or four weeks. It is gregarious, several hundred of them being herded close together, immovable, apparently sucking the sap; but if disturbed, or frightened, they scatter instantly, some falling to the ground, others running with more speed than one would expect from their awkward appearance. I have not traced any direct injury to them, but as they are always full of sap, I presume they must weaken the tree. I kill them by taking a piece of cloth and covering the whole herd suddenly and crushing them. Can you give me name and particulars regarding them?

I read with much interest the article of your amusing and quaint correspondent, "Pisistratus." He is an amateur after my own heart—one of that class of men who dignify the mercantile profession, and having made money make good use of it, and make themselves and others happy by experimenting and ornamenting in a style which we less fortunate mortals can rarely afford. But he is a good example of the difficulty of writing clearly and understandingly on agricultural and horticultural topics. He complains of books "not imparting the *whole* knowledge required," and immediately falls into the same error—if *error* it can be called, when it is general with every one who is master of an art, when he attempts to teach it to those who know nothing of it. He forgets that what is perfectly familiar to him is "Dutch" to the others. And thus as regards his *rhubarb*—I should like to try his plan if I knew how. Can you induce him to favor us with a detailed account? When are the roots taken up? What are they planted in in the barrel—in earth, or only in fresh manure? Does he water them? Is the manure put *into* the barrel from the plant to the top, or only *over* the barrel, leaving a vacancy between the plant and manure? Was manure used in the house!—or, if not, what was used to force? Will he be so good as to explain, step by step! F.—*Grosse Isle, Mich.*

THE CURCULIO.—I trust your correspondent, JAMES MATTHEWS, Esq., will pardon me for applying the heading of his article in the February number of this volume to my own use, when he finds that which I write will help to confirm his opinion as to the utility of digging about the trees as a preventive of the depredations of the curculio. Every fact relating to the curculio must be interesting to those who cultivate fruit trees.

It is a fact, that I never raised any cherries, plums, apricots, or nectarines from two hundred trees, embracing many varieties of the fruits named, since the trees were planted seven years ago, until last summer; and then only on a very limited scale, the fruit having been all destroyed by our common enemy.

The words *any* and *all* need a very slight qualification—my instinctive love for truth will not let them pass without it.

I had raised a cherry, a plum, a nectarine, and, I believe, an apricot; but, as SAMUEL VELLER would have said, it was only an "agriwashon." Last season three trees partially escaped the ravages of the Turk—two of *Prince's Imperial Gage* plum bore each about one quart of perfect fruit, and one tree of the *Lombard* plum bore a peck of fruit, but some villainous boys stole it the day before I intended to gather it myself.

Having no faith in luck (as I never yet met with it), I attributed this trifling success to the kind of individual escapes you mention in your marginal note to the article by Mr. MATTHEWS. Those three trees were manured and dug around some considerable time after the curculio had commenced operations—in the latter part of June; they had been neglected in the hurry of work earlier in the season: no other trees were dug around at the same time. As I did not expect any fruit, I did not look for it; my attention was called to those trees some time afterwards. A reason for the fruit hanging on those trees, and only on those, never occurred to me till I read the excellent article on the curculio by the above named correspondent. If this is a remedy, nothing can be cheaper. I hope it will be tried extensively this coming season. If it fails, no loss can occur by its application.

I do not understand the philosophy of it. Poultry will scratch in any place fresh dug and manured. They may in my case have rendered good service by frightening or otherwise annoying the curculio—as seventy or eighty fowls had the run of the place last season. WM. HOPKINS.—*Pomona Brunswick, near Troy, N. Y.*

CHINESE PEACH.—In the spring of 1850 I received, as a present from my friend, Mr. CHARLES DOWNING, of Newburgh, a peach tree imported from China direct, and as Mr. D. informs me it has not yet fruited with him, I presume mine is the first in this country.

On the 2d of March, 1851, the blooms first expanded, and on the 20th of July following a half-dozen peaches ripened. Last year they flowered about the same time, and ripened the 12th of July, the flowers expanding some ten or twelve days earlier than the general sorts. The fruit is of the second size, small stone and cling, greenish cheek tinged with pale red principally around the stem; inclined to be long and somewhat flat, much more so than ordinary peaches; the skin remarkably thin; flesh juicy, of the very highest vinous flavor; the whole appearance what would be termed beautiful. It has now been tested for two years by persons who are competent judges—for we flatter ourselves in this part of the world we know *what peaches are*—and all concur that it is the most delicious peach they ever tasted. To have it in perfection it must be taken from the tree, the skin being too thin to bear transportation. Last summer I took to a friend thirty miles on the railroad one packed in cotton, and the slight jar of the road caused it to turn almost black—I mean the color fruit becomes when it gets bruised. The original tree is of a low dwarfish habit, while those I have budded are of a strong, vigorous growth. I have disseminated it freely, giving buds to all who have asked, and am in hopes that in the course of a very few years it will be common all over our country. I consider it the most valuable acquisition we have ever received in that department, and if I can get a competent person will send you a correct drawing this summer, provided we don't lose our crop. HENRY LYONS.—*Laurel Park, Columbia, S. C.*

OSAGE ORANGE.—I notice in the number of the *Horticulturist* you were so kind as to send me the request of a gentleman to be informed “whether the Osage Orange is liable to throw up sprouts from the roots of a hedge?” I can, with confidence, give assurance that it will not. I have 16 rods of an Osage Orange hedge between my garden and orchard, which has been repeatedly, deeply, and closely plowed on the orchard side, and closely and well spaded on the garden side, without inducing a sprout to show itself. And, further, a few isolated plants were left in the nursery bed to ascertain what they would come to in lat. 42° north, and the ground around them used for onions, beets, salsify &c., without bringing up a sprout. And, further, in order to ascertain how late the Osage Orange could be cut down in a hedge without destruction, on the 29th day of June last I sawed down one of these Osage Oranges even with the ground which now exhibits five healthy sprouts from about the stump *only*. The plants of the Osage Orange are very distinctly of the tap-rooted kind.

The defection of seed so frequently complained of, I believe to be generally a deficiency of soaking. I met, on my first undertaking the culture of the Osage Orange, with the almost entire loss of \$10 worth of seed, which I procured in Pittsburgh, although I carefully followed the directions of the nurseryman, in soaking six days and changing the water daily. The following year I soaked the seed two weeks, changing the water, producing tolerable success. Last spring a quantity of seed was set aside in a marble mortar filled with water, and from neglect was not discovered until four weeks after planting; I then planted them. The season of soaking had now been between six and seven weeks, and I believe the seeds all vegetated and the quicks are now equal, if not superior, to those planted a month previous. I have used different native plants for live fencing, with indifferent success. I am now under the impression that the Osage Orange is better adapted for this purpose than anything else obtainable in the United States. By proper

culture, the plants can probably be acclimated to any region, hardly excepting Iceland; and why is it not more generally cultivated and appropriated? Without question, for lack of that information so generally proffered in agricultural and horticultural papers. G. A. MEKKER.—*Jefferson, Pa*

MEMORIES OF MAY.

BY THE AUTHOR OF "FOREST GLEANINGS."

"Q. Flowers, wherefore do ye bloom?"

A. We strew the pathway to the tomb."—*Jas. Montgomery.*

From earliest childhood to extreme old age flowers form one of our most innocent, as well as most delightful, sources of enjoyment, pure and unsullied by aught of the grossness that mingles with more animal pleasures. The first dawning of our intellectual nature may be dated from the moments when the babe stretches forth its tiny hand to grasp the flowers in its nurse's bosom. The unborn sense of the beautiful in form and color, springs to life in the soul of the child; it awakens at once to the enjoyments of a new and pleasurable sensation.

I love to see an innocent child playing with flowers—fresh, fair flowers—meet emblems at once of its beauty and its frailty—for "he cometh up and is cut down as a flower of the field." How charming are the verses of our old English poet, addressed to Daffodils—

"Fair daffodils we weep to see
Thee haste away so soon."

—and those "To Blossoms" They are so beautiful in their sweet simplicity, that I will quote them, assured that those who know them will re-read with pleasure such lines; and those who never read, will read them again and again, as I have done ever since I was a child.

TO BLOSSOMS.

"Fair pledges of a fruitful tree,
Why do ye fall so fast?
Your date is not so past
But ye may stay yet here awhile,
To blush, and sweetly smile,
And go at last.

"What were ye born to be?
An hour or half's delight,
And so to bid good night?
'Tis a pity Nature bro't ye forth
Merely to shew your worth—
Then lose ye quite.

"But ye have lovely leaves, where we
May read how soon things have
Their end; none e'er so brave
But after they have shown their pride,
Like us, awhile, they glide
Into the grave."—*Rob't Herrick.*

The freshness and spirit of old ISAAC WALTON seems to breathe through these lines—and then his rural poetry recalls the time when maids went Maying, and fairies danced the lea.

In this work-day, money-making world, we have cast aside, as old fashioned garments are thrown by, all taste for the simple habits and rural pleasures that marked our ancestors. The dead go to the grave undecked with the flowers which the hand of dutiful affection used formerly to lay upon the pulseless heart and clay cold brow. The wreath that used to be suspended in the church—that pure and emblematic hatchment which even yet is hung up by the peasant children of France and Italy—is no longer displayed to tell that one bud or one blossom has dropped

from the family tree to wither in the dust. The green turf that covers the remains of the loved one is no more strewn with flowers. Is our love less warm, or has fashion forbidden the exercise of the kindly feelings of our hearts, that we no longer

"Bring flowers for the brow of the early dead."

The artist decks our brides and brides-maidens with roses and orange blossoms, but the fragrance of nature is wanting—the dewey freshness of buds and flowers from the garden and field.

Where now are our May Queens? How lovely is the remembrance of May-day in the meadows, on the banks of the river Daveny in Suffolk, where I passed my happy childhood. What weeks of joyful anticipation that day gave birth to. My father's family came from the North of England, where still among the fells and lakes many of the rural sports and primitive customs of the people prevail, and he encouraged in us a love for May-day sports.

I was one of the youngest and a pet, and so my sisters always conferred on me the May crown and sceptre; and truly, for the time being, no queen could be more happy. My crown, a flowery chaplet—my sceptre, a flower-encircled wand of fresh cut hazel from the copewood—and my throne, a green mole hill in the meadow by the clear flowing river, while all the sisterhood danced round and sung the old pastoral song of "Kate of Aberdeen." The crown was worn till night and then cast aside to wither in the dust.

I have often heard my mother tell how she was frightened on the night of May eve by one of my sisters walking in her sleep. The children were in the habit, on May morning, of rising up by sunrise to go Maying, and to gather laps full and baskets full of cowslips, primroses, blue bells, and other spring flowers, to make garlands with. My mother was in bed but not asleep, when the door of her bedroom slowly opened and a little figure in a long white night-dress came in; passing the night light and the table, it came to the side of the bed and held up the full folds of the night gown in its little hands, saying, as it did so, "Fowers Lila, Fowers Lila—more fowers." Her dark eyes were rayless and wide open; but she was sleeping, though her spirit was abroad gathering flowers for the coming festival of May-day.

Not more than half a mile from the old house where I passed my childhood, there was a deep, sandy road called the St. Margaret's road; from this there branched off a little narrow lane, which we called the little lane; on one side it was shut in by steep sand banks, and on the other by a high grassy slope, the boundary of some upland meadow; on this grew a wild, irregular growth of shrubbery and tall oak trees. Among this jungle, the woodbine and wild briar rose entwined themselves, mixed with brambles and briars, forming luxuriant bowers all carpeted beneath with wood strawberries and wild flowers of every hue. A little tinkling rill that a child might step across, run down on either side this sylvan lane; from this slender streamlet we drank the most limpid water from nature's own chalice—the hollow of our hands—or sipped it like the fairies we had read so much about, from the acorn cups that strewed the grass. The banks of the rill were lined with violets—deep purple, fragrant violets—pale primroses, and the little sunbright's celandine, with that graceful meadow saxifrage, (known in olden time by the homely name of ladies' smocks), all silver white, as SHAKESPEARE calls them. What stores of ripe strawberries we gathered in that little lane, and threaded, like crimson beads, upon a stalk of dried grass—a little peace offering for our mother when we returned with soiled frocks, or our leave of absence out-stayed.

This little lane was our childish paradise—our garden of Eden—and in it we laid out and planted a garden for ourselves. Like Canadian squatters, we took to ourselves right of soil and made a free settlement *sans ceremonie*.

Our garden was laid out right daintily with a grotto of green moss decorated with striped snail shells, the walks were sanded, and the parterres planted with double daisies and violets, polyanthus and sweet Williams, daffodils, snowdrops, and cloth of gold crocuses. Our trowel was an old rusty iron ladle and a broken bladed carving knife, while we daily watered our garden with

an old battered tin tea-pot and a leaky japanned mug; and yet, in defiance of these rude implements, our flowers grew and the garden blossomed in the wilderness; and there, sheltered from sun and shower, among the bowery honeysuckles, we sat reclined on the green turf bank, listening to the poems and tales that my two eldest sisters used to relate. Even then history was the theme that most delighted those two most remarkable sisters,* and many was the tale of thrilling interest that was recited to the juvenile auditors, who little thought that those talents were at a more distant date to claim the approbation of an applauding public.

Many years after this, I revisited the little lane. A few crocuses and daffodils, choked with long grass and weeds, were the only flowers that remained to "mark where a garden had been." I stooped and drank of the little rill and picked a nosegay of sweet violets as a memento of the haunts of my childhood.

Tell me, ye who sigh for the crowded ball-room and gay theatre, what are the pleasures of the world compared to the memory of days spent in early youth among the Flowers of May.

SEVERAL articles (among them the proceedings of the Pennsylvania Horticultural Society) prepared for this number are crowded out. We shall endeavor to meet all demands upon our pages next month.

Notices of Books, Pamphlets, &c.

THE NORTH AMERICAN SYLVA: Or a Description of the Forest Trees of the United States, Canada, and Nova Scotia, considered particularly with respect to their use in the Arts, and their introduction into commerce; to which is added a description of the most useful of the European Trees. Illustrated by 156 copperplate engravings, by REDOUTE, BESSE, &c. Translated from the French of F. ANDREW MICHAUX. With Notes by J. JAY SMITH. In three volumes. Published by ROBERT PEARSON SMITH, Philadelphia.

We are happy to learn that the superb edition of this great national work published by Mr. SMITH, and which has already been noticed in the *Horticulturist*, (volume 6, page 541,) is in such demand that copies cannot be supplied as fast as they are called for. This speaks well for the growth of taste among the American people and for the interest they are taking in the productions of their own forests. It is a work that deserves the most complete success, not only for the important information which it contains, but for its elegance. The style of the engravings is good, and the coloring, done in this country, is, in many respects, equal to the original French edition. Those editions have long been out of print, commanding, before this appeared, no less than one hundred dollars a copy; that price was offered to our late American Ambassador in London for MICHAUX alone. The present edition, better translated than the English one which appeared in Paris, is now to be procured for *twenty-four dollars*; and with NUTTALL's Continuation, also, in three superb volumes, the whole is offered for *forty-five dollars*.

From the nature of this work it can never become a "common book;" indeed, to possess it will always confer a sort of distinction. It is even now somewhat difficult to procure a copy of this new edition, so much time is necessarily employed in coloring the plates by hand, as so few artists exist in this country who can be trusted to work upon them. They give regular support to a number of ladies and gentlemen who do little else than color from morning till night. The result is pictures entirely fit to be framed for ornamenting a drawing-room. By a little study of its valuable plates and comprehensive letter press, all may identify the products of our splendid forests, and learn to love what is so beautiful and worthy of study. If it were only to be able to know exactly all our American Oaks, or if

* ELIZABETH and AGNES STRICKLAND, authoresses of the *Queens of England and Scotland*.

they only were figured by this master of engraving, the work would be cheap, nay invaluable; but in addition, we have in MICHHAUX and NUTTALL all the trees of our continent. The first named author described the trees of the Atlantic slope, and NUTTALL continued the labor to the Pacific, including Oregon and California. The trees from these new possessions are already finding their way to our nurseries and gardens, and NUTTALL's volumes are therefore indispensable, for his are the only descriptions extant of these western novelties.

Mr. SMITH, the editor, happily remarks in his introduction, "It was a singular circumstance, and a happy one for advancing science, that Mr. NUTTALL arrived in this country the very year that the younger MICHHAUX left it. * * * * The two works are now one and homogenous; the former most highly valued by all lovers of trees, and the latter destined to be equally so." We may add that it has proved also fortunate that a publisher has been found to encounter the risk and labor attending the publication of such works, and who was willing to give the personal attention requisite to turn out every copy of the *two hundred and seventy-eight* plates in such excellent style and condition. It is to be hoped that he will ultimately be entirely remunerated. This he never could have been but for another fortunate circumstance, which might almost be called an accident—the liberal contribution of books and money to several scientific institutions in this country, especially to the Academy of Natural Sciences at Philadelphia. The late WILLIAM MACLURE was in Europe at a period when all literary property was at an enormous discount, owing to the state of war in which France had involved her. Among other treasures which he purchased and sent home, was REDONTE's original copper plates of MICHHAUX's great work. They were in beautiful condition—entirely without a blemish. Mr. MACLURE's sole object was to enlighten his countrymen, and he caused a small edition, on very bad paper and executed carelessly by his agents, throughout, to be issued; but it proved an abortion—only purchased for the want of a better. Still, in hope it might sometime have a better fate, he presented the whole of the copper to the late eminent President of the Academy of Natural Sciences, the lamented SAMUEL GEORGE MORTON, M. D. He was animated by the same public spirit as Mr. MACLURE, and gave the use of the plates gratuitously to the present publisher, on condition only of his producing an edition to rival the original French copies. This has at length been done at a price that could not have been attained but for such distinguished liberality. We have given this history, both because it is interesting in a literary point of view, as well as to do justice to the gentlemen who have thus raised monuments for the gratitude of their fellow citizens. We have in the first place the father and son, MICHHAUX, and NUTTALL, three individuals the best qualified for the purpose as authors, now neither claiming nor desiring the slightest compensation for their years of labor, toil, and travel; we have Mr. MACLURE and Dr. MORTON giving their contributions of the plates gratuitously; and finally Mr. SMITH, the editor, himself a devoted lover of the subject, with assistance in correcting the translation, superintending this edition, also, we are informed, gratuitously; and a young publisher, with little hope of even remuneration, placing the work at a very moderate price before the public.

The elder MICHHAUX is deceased, having fallen a sacrifice to his scientific zeal on the coast of Madagascar; REDONTE, the engraver, who has left such a world-wide reputation by his engravings of the work, the *Liliaceae* and *Rosacea*, &c., is no more; both Mr. MACLURE and Dr. MORTON have lately paid the debt of nature.

The elder MICHHAUX commenced the "*Sylva*," by describing the Oaks of America; his son F. ANDRE MICHHAUX, who completed it, still survives, and resides in Paris at the age of

eighty-three years. He displayed a vocation for the natural sciences at an early age, and accompanied his father on his voyage to America. In 1802 he was employed by the French government to explore the country west of the Allegany mountains, and published in 1804 his travels in that then distant and almost unexplored region. A second volume contained a memoir on the naturalization of roots of American forest trees in France. In 1810 he published the *Sylea*. No country can boast a more magnificent or useful account of any part of its natural productions; it unites the advantages of a work strictly botanical, and of one relating to the useful arts, collecting all the scattered details which books or experience could furnish him, with respect to the application of the various kinds of wood to the purposes of life, which are extremely useful and important at the present day. The fame of both father and son may be regarded as the common inheritance of France and the United States.

If we had more space at our command, it would afford us pleasure to extract some striking remarks of the editor of this edition on planting, and on the value of particular trees in ornamental gardening which are now sadly neglected. What more beautiful, for instance, than the *Virgilia lutea*, or yellow wood, with its panicles of locust-looking blossoms and its remarkable trunk and deep yellow autumnal foliage, which Mr. SMITH strongly recommends, and not too warmly, as a tree to be eagerly sought for. A native of a small district in Tennessee, it has been occasionally seen in nurseries for sale, but its value being little known it is now very rare among us. Mr. SMITH's additions can always be known by being inclosed in brackets, and they constitute no small addition to the value of the work. They embrace notices of the mode of culture, remarks on the beautiful and ornamental, and fitly accompany the more scientific observations of MICHAUX.

By permission of the publisher of this work, we present in this number a drawing of the *Magnolia glauca* as a specimen of its illustrations. This is a beautiful small tree abounding in the swamps of New Jersey and southward, called the "Swamp Laurel" or Magnolia. Its leaves are four or five inches long, green and shining on the upper surface and glaucous or silvery beneath. The blossoms are about three inches in diameter, pure white, and so fragrant that a Magnolia swamp diffuses its fragrance for upwards of a quarter of a mile around. It is readily propagated from seed which is easily obtained. The soil should be in part, at least, peat or leaf mold, and the situation somewhat sheltered.

Answers to Correspondents.

(GEO. LESLIE, Toronto.) Your seedling Cineraria flowers came safe to hand. They are all very pretty, and some of them well worthy of being named and propagated. No. 1 is the best in form, with a good, broad, thick petal; center white, with a deep edging of violet purple. Nos. 6 and 8 we think most showy. Nos. 1, 2, 6, 8, 9, and 13, are most worthy of being retained.

(J. G. R. K., Lovettsville, Va.) The shrub to which you refer, is the Rose Acacia, or Moss Locust, (*Robinia hispida*), quite common and very pretty.

The December number was sent as requested.

Will you give a subscriber some information where the Rough Plate Glass, spoken of in the *Horticulturist*, Vol. 7, No. 11, Page 519, can be had, and at what price? J. B. B.

It is manufactured in England. Any importer of glass can procure it for you. We can not say what the price is.

FRUIT ROOMS.—In reply to several inquiries in regard to fruit rooms, we will say that a dry, cool, clean cellar answers a good purpose. At this moment (May 10th) we have twelve or fifteen varieties of winter apples and half a dozen of winter pears in fine condition, in a dry, cool cellar, under a portion of the house seldom heated during winter. The floor is laid with plank, and shelves of whitewood are fitted up around the walls. The pears have mostly been kept on these shelves; some in boxes between layers of rye straw. The apples have been kept in barrels.

A fruit room should not be occupied otherwise, as the frequent opening and shutting of doors produces sensible changes in the temperature unfavorable to the fruit. Cleanliness is a great point; the removal frequently of all decaying fruits, and of everything that can possibly taint the atmosphere.

FRUIT ROOM.—For a number of years past a portion of my time and attention has been directed to the pleasing task of collecting and rearing of many of the choicest kinds of fruits and fruit trees, selected from the various catalogues and nurseries within a reasonable reach of this place; and however excellent or desirable the rich products of such a plantation or fruit garden may be to those whose hands have planted and daily watched them, with the pleasing prospect of an approaching harvest, until we are enabled to partake of the choicest fruits of the vine, still we find some of these, from the common mode of gathering and preserving them, of short and limited duration, and more especially in regard to the pear, the peach, and the grape. Hence, I have come to the conclusion to furnish myself with a fruit room for that particular purpose, and wish to make some inquiries in relation to the same. I wish, if convenient, you would answer the following queries in a coming number, or give us an article thereon.

I shall first give a description of my plan. My cellar is of a dry and gravelly substance. The surface of the ground at the west end is even with the bottom of the cellar. I propose having the fruit room partly in the north-west corner of the cellar, taking in four or five feet further west, and having a half roof sloping upwards to the west end of the house. This projecting part is guarded on the north by a wood-house extending several feet further west, and shaded on the south and west with a thick foliage of Maple and Locust. The entrance door is from a hall in the cellar.

Will such a location be a suitable one, economy and expediency taken into account? And if so, what would be the best materials for the inside wall, lath and plastering or matched boards? Also, what would be most suitable for filling in the same, dry saw-dust or tan-bark? Will boards or cement be best for the floor of the room?

Any further information would be interesting and desirable. In regard to the ventilators, how many would be necessary? How constructed and regulated?—and such other information as may be deemed necessary. DANIEL E. GERARD.—*Haviland Hollow, N. Y.*

We should think the position a very good one. For filling up the hollow wall we should prefer coarse saw dust or shavings from the planing mill, and dry, well seasoned boards to lath and plaster—one and a half or two-inch plank will be better than inch boards. Cement will make the better floor, as it will keep out vermin.

THE BLUE ASH.—A correspondent in Chilloothe, Ills., writes thus:

"One word as to the prettiest lawn or street tree that grows indigenous in this section. I think the Blue Ash, as it is called here, is, on the whole, ahead of any other tree. Its foliage being of a very dark green with a shade of blue, and having a fine globular head, renders it an object to attract the attention of the most careless observer. It somewhat resembles the White Ash, but the foliage is more dense, the tree more symmetrical, and the wood far more durable."

Will you permit a subscriber to the *Horticulturist* to trouble you with the question—How to rid a garden of a worm which infests it? A portion of my garden was filled in with sandy loam two years ago and since liberally manured. I now find it overrun with worms about three-quarters of an inch long, whitish colored and having numerous feet. In stirring up the surface I find abundance of what seem to be nests of them, containing clusters of 100 together. I believe they are eating up all my Crocus and Peony bulbs, and am afraid they will ruin the garden. I find them also on my Asparagus bed. Can you suggest a remedy? I shall be extremely obliged to you to do so. WM. BROOKS.—*Little Falls, N. Y.*

The most effectual method known to us of ridding a garden of these destructive grubs is to have the ground thrown up into narrow ridges in the autumn, so as to expose it thoroughly to the frosts of winter; also to apply a dressing of warm lime, ashes, &c. These operations must be repeated annually, and in every spadeful that is thrown up they should be searched for and killed.

INCLOSED is a piece of a shoot of the American Black Raspberry, which we cultivate. On splitting it open, you will find it filled with the eggs of an insect. It attacks the young shoots of our trees while they are growing, and punctures them in rows, like the shoot before you. Our Peaches, Plums, Cherries, Climbing Roses, Weeping Willows, and Raspberries, are attacked every summer. To the Willow it is always fatal, the tree dying down to the point of attack. Please let us know what it is and how to get rid of it. NOBLE S. HAMMOND,—*Essex, Cin. Co., Mich.*

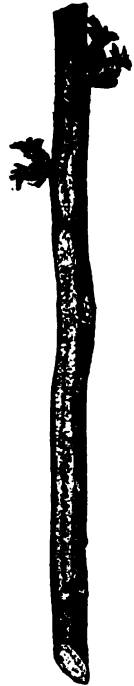
Cut off and burn all shoots like this, in which eggs have been deposited.

I AM getting together a compost heap formed of swamp muck, barnyard and stable manure, lime, ashes, (unleached,) and charcoal. The ashes are, perhaps, one-fifth lime, as they come from the kiln; the lime is air-slaked only when it goes in the heap. I purpose having by August from six to seven hundred single cart loads in the heap, which is to be used in planting an orchard in the fall and spring (about twenty-seven acres) in Apples and Pears. Now what I wish to know is whether it will be best to dig holes four feet square and use the compost when planting, or apply it to the surface, say in strips ten feet wide, where the trees are to stand, and plow and trench plow in the month of September, so as to be ready for planting in October and November; and whether it is a good plan to use the lime ashes, as stated above, and what proportion! I have been using so far one-tenth. My land is good sandy loam on clay subsoil, yielding good crops of wheat and corn. A SUBSCRIBER.—*Frederick Co., Md.*

The materials of your compost are excellent, but it will be all the better if at least *one-half* be stable manure. Twenty-six one-horse cart loads to the acre is a small allowance, and must be applied economically. It might be as well to spread it on the strips intended for the rows of trees and plow it in. The trees in this way will get as much as may be necessary for two or three years, and after that they may receive top-dressing if they require it. Manure should never be placed immediately on or about roots of trees at time of planting, but placed so near that their young roots will soon strike into it. We prefer to use lime ashes as a top dressing, to mixing with manure.

I have received from France a *Rhododendron Ponticum*. Is it very hardy in this climate, or must it be covered in winter? Must the *Fustolff* Raspberry be protected in winter in the same way as the *Red Antwerp*? A SUBSCRIBER.—*New York.*

We would advise a slight protection for both, though in most seasons they might get along without it. The *Rhododendron* suffers most from sun in the winter.



THE TRANSPORTATION OF TREES AND PLANTS.—As one of the craft, and having considerable to do with shipments of trees and plants, I wish to know whether there are on record any legal decisions with regard to cases of neglect or delay in forwarding. Though such occurrences are very common, and often very aggravated, I do not now remember to have heard of any prosecutions. As important an item in transportation as trees and plants have become, it certainly seems to me high time that forwarders were a little better posted up in their duties and the public in their rights.

If you know any decisions please inform us. If there are none now there ought to be, and, though a "peace man," I would, if need be, cheerfully contribute to test some (reasonably provoking) case. F. K. P.—*Delevan Nursery, Wis.*

This subject has a most important bearing upon the interest of Horticulture at this moment. Railroads are so overrun with freight, and forwarders are so careless, that it has become next to impossible to forward trees with reasonable dispatch. It is not uncommon for parcels to be delayed between Rochester and Buffalo (about 75 miles) some six or eight days. Can we not have an arrangement made with some of the express companies at moderate rates? Something must be done. We believe that forwarders are responsible for any loss incurred by unreasonable delay; but there are so many excuses, and it is so difficult to reach the culpable party, that law is of little use.

BUGS IN PEAS.—From the universal complaint of bugs in peas, I am led to infer that there is no known variety exempt. Is this so? However this may be we have a red variety (whereof the enclosed is a sample) of good flavor and productive, that during seventeen years constant cultivation in our family, has never, that we know of, till the past season, shown a buggy pea, though often grown with other badly affected varieties. When grown together, mixed with these affected sorts it has seemed in a measure to protect them, for there would be comparatively few buggy ones. Do you know the variety? (1.)

For years now I have been beset and tantalized about a "*Connecticut White Rose*," so very large, and double, and nice, and tall growing withal, that all I can possibly get hold of in the nurseries are no comparison. The *Globe White* is pretty, *Madam Plantier* and *Madam Hardy* very fine, but they are not the kind after all. In utter despair I appeal to you—what can it be? (2.) F. K. PHOENIX.—*Delavan, Wis.*

(1.) No.

(2.) Probably the old *White Provence*.

Will you please answer the following questions in the next number of the *Horticulturist*?

What time do you consider the best to plant Osage Orange seed? (1.)

Does Red Cedar make a good hedge? and if so, should it be shorn as hedges commonly are? (2.)

When is the best time to transplant evergreen trees, such as Spruce, Hemlock, Silver Spruce, and Cedar? (3.)

Can Mountain Ash be propagated by cuttings? (4.) A SUBSCRIBER.—*Normandale, C. W.*

(1.) About the first of May, but any time during the month will do, and even later if necessary. Soak at least twenty-four hours in warm water before sowing.

(2.) The Red Cedar does make a beautiful hedge. It requires shearing at least once a year.

(3.) From the middle of April till the middle of May. Perhaps the very best time is from the 1st to the 15th of May in your climate.

(4.) Always propagated from seeds, or by grafting or budding to increase new or rare sorts.

NECTARINE.—The fruit of my *Elzude* Nectarine dried up last summer just before its period of maturity. The tree was of perfectly healthy and vigorous growth, three years from the nursery, had been regularly shortened-in, and had brought its fruit to perfection in 1851. The most careful examination of three or four of the dried fruits disclosed no trace of an insect. Overbearing could not have been the cause, as the severity of the previous winter had spared upon this tree only twelve or fifteen nectarines. The season could hardly have caused it, for a *Hunt's Tawney*, thirty feet distant, and an *Early Violet*, only twenty feet, brought their respective fruit to perfection, in the same soil, and with the same exposure and treatment. What could have been the cause; and what is the remedy or preventive? **SUBSCRIBER.**

Cases of this kind occur often, that do not admit of a sound explanation, especially by persons that are unacquainted with all the circumstances.

A LADY correspondent writes us as follows:

"I have a beautiful White Pine, thirty feet high, covered with the *American Blight*, or Woolly Aphis, which I fear will destroy it unless you can suggest a remedy. Will sulphur, or any other medicine, inserted into its body enter the circulation and destroy the pest without injury to the tree? It is so large I cannot have access to them with any external application, unless showering with some *medicamentum*, or tobacco water, will prove effectual."

No hope whatever from *internal* applications. We really cannot suggest a remedy except the unpleasant one of cutting down trees so affected. The Scotch Pine is likely to fall a prey to it. We published some months ago a communication on this subject from H. W. SARGANT, Esq., of Fishkill, on the Hudson. On a small scale we may manage this insect, but on large trees it is beyond control.

Horticultural Societies.

ALBANY AND RENSSELAER COUNTY HORTICULTURAL SOCIETY.—We have received the list of premiums, rules, and regulations for 1853. The following is the list of officers and committees:

President—HERMAN WENDELL, M. D.

Vice Presidents—HENRY VAIL, C. P. WILLIAMS, WM. NEWCOMB, E. DORR.

Secretary—JOSEPH WARREN.

Treasurer—LUTHER TUCKER.

Managers—V. P. DOUW, B. B. KIRTLAND, J. M. LOVETT, L. MENAND, E. CORNING, Jr., JAMES WILSON, J. S. GOOLD, E. E. PLATT.

COMMITTEES FOR 1853.—*Fruits*—Dr. Herman Wendell, Albany, chairman. V. P. Douw, Greenbush; E. Dorr, Albany; B. B. Kirtland, Greenbush; D. Thomas Vail, Troy.

On Green-house Plants and Green-house Flowers—Wm. Newcomb, chairman. J. S. Goold, Albany; W. A. Wharton, Albany; Wm. Janes, Bethlehem; W. Buttercase, Watervliet.

On Gardens—Dr. Herman Wendell, Albany, chairman. B. P. Johnson, Albany, and C. P. Williams, Albany.

On Flowers—J. M. Lovett, Albany, chairman. C. P. Williams, Albany; J. McD. McIntyre, Albany; J. Mayell, Albany.

On Floral Designs, Bouquets, &c.—J. M. Lovett, Albany, chairman. W. A. Wharton, Albany; Joseph Warren, Albany; John Jacob Wendell, Albany. *Ladies' Committee*—Mrs. V. P. Douw, Greenbush; Mrs. W. A. Wharton, Mrs. Jas. Goold, Miss Reynolds, Miss Pierson, Albany.

On Discretionary Premiums—E. P. Prentice, Bethlehem, chairman. D. T. Vail, Troy; Jacob Henry, Watervliet. B. P. Johnson, Albany; S. Morgan, Watervliet; W. Durant, Watervliet.

On Essays, and on Establishing Synonyms of Fruits—Joel Rathbone, Bethlehem, chairman. Amos Briggs, Schaghticoke; Luther Tucker, Albany; John H. Willard, Troy; A. T. Richards, West Troy.

On Vegetables—E. E. Platt, Albany, chairman. Dennis Belden, Troy; Dr. John Wilson, Bethlehem; Wm. S. Shepherd, Watervliet.

On Arrangements for Exhibitions—J. McD. McIntyre, Albany, chairman. J. S. Walsh, Elisha Dorr, J. Dingwall, James Wilson, Erastus A. Pease, and Joseph Warren, Albany; D. D. T. More, Watervliet.

THE WORCESTER COUNTY HORTICULTURAL SOCIETY will hold its fourteenth annual exhibition of fruits, flowers, plants, and vegetables, at Horticultural Hall, Worcester, Mass., on the 21st, 22d, and 23d of September, 1853. The Society will also hold a series of summer exhibitions on Saturday of each week, commencing in May, (of which public notice will be given,) and closing August 27th. The following is a list of the committees for 1853:

On Apples—Dr. Rufus Woodward, Worcester, chairman. David S. Messenger, Wm. T. Merrifield, Worcester; Thomas Bond, North Brookfield; S. P. Champney, G. A. Chamberlin, Worcester.

On Pears—Dr. William Workman, Worcester, chairman. J. C. Moore, Charlton; Emory Bannister, C. H. Hill, C. C. Coleman, Worcester.

On other Fruit—Lewis A. Maynard, Worcester, chairman. J. F. Allen, Worcester; J. C. Stone, Shrewsbury; Ansel Lakin, James R. Wall, Worcester.

On Flowers and Decorations—Samuel F. Haven, Worcester, chairman. C. Wheeler, Clarendon Harris, Horatio Phelps, Wm. R. Paine, Worcester.

On Vegetables—George Jacques, Worcester, chairman. D. W. Lincoln, Worcester; C. W. Forbush, Grafton; Gardiner Paine, Joseph Lovell, Jr., Worcester.

On Arrangements—D. Waldo Lincoln, Wm. M. Bickford, Geo. W. Richardson, Sam'l H. Colton, D. S. Messenger, Charles Paine, Samuel Flagg, S. P. Champney, Joseph Lovell, Jr.

DELAWARE HORTICULTURAL SOCIETY.—At a stated meeting of the Delaware Horticultural Society, held April 19th, 1853, on motion of E. TATALL, Jr., the Secretary was requested to forward an abstract of the proceeding of each meeting to the editor of the *Horticulturist*.

The following report was received from the fruit committee: The fruit committee report that THOMAS STAPLER presented two dozen each of the *Carthouse*, or *Gilpin*, and *Greyhouse* apples, which had been kept one hundred and five days, one-half of each variety in the garret, the other half in the cellar. The *Carthouse*, kept in the cellar, were pronounced firmer and handsomer than those kept in the garret, but the latter more juicy and higher flavored, though leathery in texture. The *Greyhouse*, kept in the cellar, were nearly half of them rotten—the sound ones tasted were better flavored and firmer than those kept in the garret, which were wilted and somewhat speckled.

J. F. WILSON, M. D., Chairman.

The Corresponding Secretary reports having in his possession four ears of the "old colony sweet corn" and scions of the "*Sheldon Pear*," and that they are ready for distribution. He also reports having two apples in his possession, received from JOHN GORMAN, of Philadelphia county, called the "*Freeze and Thaw*;" he also has grafts of the same for distribution.

WILLIAM CAWLEY, Recording Secretary.

CHESTER COUNTY (PENN.) HORTICULTURAL SOCIETY.—At the annual meeting in March, the following named officers were elected:

President—JOHN RUTTER.

Vice Presidents—JAMES H. BALL, AMOS H. DARLINGTON.

Recording Secretary—ISAAC D. PYLE.

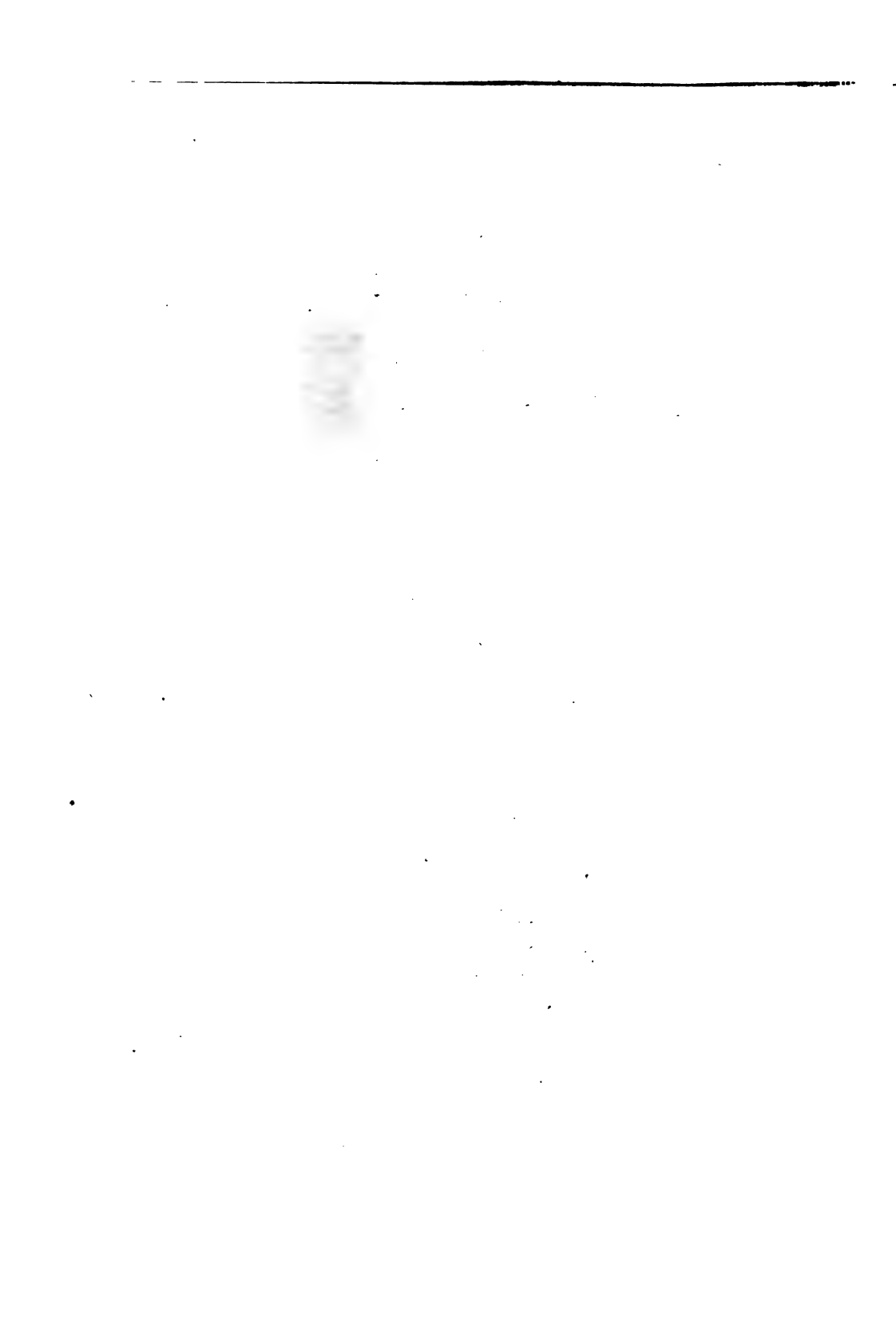
Corresponding Secretary—JOSEPH P. WILSON.

Treasurer—JOHN MARSHALL.





S. PEAR





Rural Cemeteries.

ONE of the most beautiful traits in the character of a civilized and christian people is that respectful and affectionate remembrance of the dead which manifests itself in setting apart quiet grounds for the burial place, and in beautifying them with appropriate works of art and with such trees and shrubs as are most expressive of the solemn purposes to which they are dedicated. Nothing that we can point to in this country reflects so much credit upon the public taste and liberality as our rural cemeteries. Whatever the stranger may say of our indifference on other matters, it certainly can not be said that we are indifferent as to the resting places of the dead. The lamented DOWNING wrote, three years ago, that—

“One of the most remarkable illustrations of the popular taste in this country, is to be found in the rise and progress of our rural cemeteries.

“Twenty years ago nothing better than a common grave-yard, filled with high grass, and a chance sprinkling of weeds and thistles, was to be found in the Union. If there were one or two exceptions, like the burial ground at New Haven, where a few willow trees broke the monotony of the scene, they existed only to prove the rule more completely.

“Eighteen years ago, Mount Auburn, about six miles from Boston, was made a rural cemetery. It was then a charming natural site, finely varied in surface, containing about eighty acres of land, and admirably clothed by groups and masses of native forest trees. It was tastefully laid out, monuments were built, and the whole highly embellished. No sooner was attention generally roused to the charms of this first American cemetery, than the idea took the public mind by storm. Travelers made pilgrimages to the Athens of New England, solely to see the realization of their long cherished dream of a resting-place for the dead, at once sacred from profanation, dear to the memory, and captivating to the imagination.

“Not twenty years have passed since that time; and, at the present moment, there is scarcely a city of note in the whole country that has not its rural cemetery. The three leading cities of the north, New York, Philadelphia, and Boston, have, each of them, besides their great cemeteries,—Greenwood, Laurel Hill, and Mount Auburn,—many others of less note; but any of which would have astonished and delighted their inhabitants twenty years ago. Philadelphia has, we learn, nearly twenty rural cemeteries at the present moment,—several of them belonging to distinct societies, sects or associations, while others are open to all.*”

Since this was written, there has been no abatement whatever of the public taste for rural cemeteries; on the contrary, it has grown stronger, and spread wider, until not only the large cities, but hundreds, and perhaps thousands, of country villages have

*“We made a rough calculation from some data obtained at Philadelphia lately, by which we find that, including the cost of the lots, more than a million and a half of dollars have been expended in the purchase and decoration of cemeteries in that neighborhood alone.”

grown ashamed of the neglected, exposed, weedy, forlorn looking spot called the *grave yard*, and have tried their hand at fencing and planting, and otherwise giving them somewhat of an aspect of culture and civilized care. We are too happy and too thankful that such a spirit is abroad among us to grumble at any errors that are, or have been, committed in the management of these cemeteries; but as new ones are almost every day being laid out, we feel it our duty to offer a few hints that may guard their founders against errors that others, it seems to us, have fallen into.

Mr. DOWNING remarked in the article we have already quoted from, that "the great attraction of these cemeteries, to the mass of the community, is not in the fact that they are burial places, or solemn places of meditation for the friends of the deceased, or striking exhibitions of ornamental sculpture, though all these have their influence. All these might be realized in a burial ground planted with straight lines of willows and sombre avenues of evergreens. The true secret of the attraction lies in the natural beauty of the sites, and in the tasteful and harmonious embellishment of these sites by art."

The cemeteries of the larger cities, where competent artists and workmen are more easily obtained, exhibit in many of their embellishments both taste and harmony, though in the best there are very many exceptions. In the interior, however, where the grounds have been laid out by mere land surveyors, and where every improvement has been made under the direction of persons not having the shadow of a qualification, one finds, as might well be expected, scarcely anything but a repetition of blunders—violations of taste the most aggravated, and a worse than waste of both labor and material. When a city, or a village, or a company of individuals, resolve upon founding a rural cemetery, and expend their money upon a tract of ground which we will suppose the most suitable that can be had, their first step should be to secure the assistance of a person properly qualified to appreciate every feature of it, every outline and undulation of its surface, and every tree and shrub that nature may have planted on it.

It seems very singular that people should not act in these as in their ordinary business affairs. If a company of capitalists unite in constructing a steamship they will not be likely to employ a blacksmith, or a shoemaker, or a gardener, to build it. If they would do so foolish a thing, they certainly would be placed in an insane asylum directly. Now the building of a ship is just as possible to the gardener, or the blacksmith, or the shoemaker, as the laying out of a cemetery would be to any of these craftsmen. Acting like wise men, they will employ the most competent ship-builder that can be found—one who has mastered the theory and practice of his profession by long years of study and practice. So in everything that people wish to be well done, they employ competent and skilful workmen. It happens, however, that in certain communities the landscape gardener is not a recognized individual. People who would not deny the necessity of employing a good artist to paint a landscape on canvass, do not understand the necessity of employing a skilful and well-trained artist to work a beautiful landscape out of nature's raw material. Here is a piece of ground for a rural cemetery—it is to be laid out—intersected with walks and avenues

—improved and embellished—and the surveyor is called in to do it. He, with an eye merely to certain conveniences in getting from one point to another, carves it up into patches as though he were mapping out the site of a new city; and the ground is ruined. Two cemeteries in Western New York that might have been gems of taste and beauty, laid out in the most picturesque spots that could be desired, were hopelessly disfigured by this sort of management. There is not only no economy in this, but an actual waste of means. Let a competent person be at once employed who will carefully study the features of the ground and draw up a complete general plan, upon which, and conformable to which, all future improvements shall be made; and let this plan be rigidly adhered to, and tastefully and skilfully carried out, from year to year, as the improvements progress.

In regard to the management of the ground surface in cemeteries, we have always regarded the prevailing system of cutting it up into small lots, and indicating the outline by some conspicuous boundary or enclosure, as quite inconsistent with good taste. If we could raise ourselves to a sufficient height to take a birds-eye view of such a surface it would present a piece of motley patch-work thrown together apparently without design, and in violation of every rule of taste and harmony. In some of the European cemeteries, laid out upon a geometrical plan, and embellished lavishly with sculptural ornaments, these straight lines are not at all offensive, because in keeping with the general plan; but nearly all our rural cemeteries are laid out in what is designated the modern, natural, or landscape style. In these rural or landscape cemeteries we would discard all prominent rectangular enclosures, if possible. The system of allowing one man to enclose his lot with a white wooden railing or a regular picket fence, another with a ponderous iron railing, another with granite posts and iron chains, —some with box edging, others with privet, or thorn, or cedar, or rows of trees dotted around, makes a sad jumble, in our estimation. Then see what all these things cost. In a cemetery we might name, and in all our cemeteries, we dare say, thousands of dollars have been expended in these so-called improvements. How common it is to see four or six trees, Balsam Firs or Spruce, and perhaps a Weeping Willow, and, it may be, two or three other trees, planted on a small lot some twenty feet square, where a single appropriate tree would have been infinitely more pleasing. Where every lot owner is thus allowed to plant how and what he pleases, to exercise his own individual taste or rather whim, regardless of the general effect, it is quite impossible, whatever the original design may have been, to produce any pleasing results. Why not proceed upon the plan that all embellishments, in the way of trees, shrubs, and plants, shall be made by the superintendent of the grounds, who we will presume to be a competent man, working upon a well understood and approved general design? Will people not be willing to sacrifice their individual tastes and vanities for the general good, in the same way as the citizens of a town entrust the embellishment and care of public parks or grounds to a competent person, rather submitting to be taxed for its support than that each should perform a certain portion of the work themselves? Every man's lot might be indicated by inconspicuous objects placed at the corners; the surface might be all an unbroken lawn, and the trees planted in such a manner as to

produce the best effect in harmony with the general design. This would not prevent lot owners from indulging a fancy in the way of planting some favorite tree, or shrub, or plant, near the grave, and it obviously would be a great economy in the management. Different parts of the ground might be laid out and kept in a less costly or a more expensive manner, as might be required to accommodate people of various means and different degrees of taste and liberality. It strikes us that unless some such system be adopted and carried out, we cannot hope to have rural cemeteries really and truly worthy of the name, and of the care, and labor, and money we are expending on them. A few years hence the errors that have been committed will become more apparent, and, at the same time, more difficult to correct.

Another point deserves a remark. In many of the cemeteries the graves are raised to an unnecessary, and, in some cases, to an absurd height above the ground level. This is objectionable for several reasons:—1st, It looks bad. What necessity is there for throwing up a huge bank of earth merely to mark the locality of the grave? Does not a gentle elevation not exceeding twelve inches, or even half that, look much better? Then on these elevated mounds neither grass nor any other plant can bear the heat and drouth of summer, and a heap of bare red earth is left to indicate the grave. This thing has puzzled us a thousand times. We would not divest a burial ground of its natural and essential characteristics—we would not have it appear as a mere park or pleasure ground—but we would seek, by judicious arrangement, to give greater force and expression to its various embellishments, whether artistic or natural, and to increase the evidences of taste without increasing the expense.

“Insult not Nature with absurd expense,
Nor spoil her simple charms by vain pretence;
Weigh well the subject—be with caution bold;
Profuse of genius—not profuse of gold.”

In the selection of trees for cemeteries there are many errors committed, simply because people who have not had opportunities of knowing what is or is not suitable prefer their own choice to that of a person properly qualified to choose. We lately saw some lots “improved” by planting around them such trees as sugar maples and mountain ash in something the style of hedge rows! Can we see such aggravated cases of mismanagement without protesting against them? Not, certainly, if we do our duty or obey our impulses.

We shall at some future time have something to say of trees peculiarly adapted to cemeteries.



GARDEN FURNITURE.

PERHAPS ON no subject connected with horticulture is there more need of information than suitable decorations for the garden, or *Garden Furniture*, if we may be allowed the expressive term, embracing arbors, seats, trellises, and other structures of use and ornament in the garden. How often, when viewing gardens of the greatest pretensions, are we compelled to walk from one end to the other, through beautiful shady walks and quiet nooks, without finding a resting place—no rustic seat inviting us to enjoy to its fullest extent the quiet beauty of the scene.

In the country there is no necessity for large parlors—the garden is the country parlor. Our drawing-rooms are deserted by our friends and visitors—they are to be found examining our rare shrubs and flowers—promenading our garden walks—reclining on the lawn, enjoying the grateful shade and cooling breeze. How necessary, then, that our garden furniture should be convenient and appropriate; that proper resting places be provided, to insure the fullest enjoyment of the garden by ourselves and our friends.

As in all other matters requiring taste, we often see great errors made in the introduction of garden ornaments. How common is it to see elaborate carpenter-work, painted a brilliant green or dazzling white painful to look upon, supporting a slender climber, when a simple cedar pole with perhaps a few wires would have been a much cheaper and better support. So in regard to seats, “summer-houses,” &c. In our cottage grounds of an acre or two we make a great mistake in imitating the fine architectural designs that are very appropriate when used in the extensive grounds of some European palace, with which it is in keeping, but sadly out of place in the grounds of our less pretending but perhaps not less beautiful cottage homes. As a general thing, simple rustic work made of the limbs of trees with the bark on, worked into simple and appropriate designs, is the most appropriate, though we have observed some pretty designs in iron. But even in the use of rustic work we have lately seen some sad violations of good taste. The veranda is no place for rustic seats—the seats there should be in keeping with the style of the house; yet we have seen some of these seats even admitted into the hall.

We have made these remarks as an introduction to a few designs from *McIntosh's Book of the Garden*:

“Around cottage and villa residences, nothing is so appropriate as the natural style of gardening, and no ornament so proper as rustic work; but that should always be of a substantial and tasteful description. An ingenious correspondent in *The Gardener's Magazine*, vol. x., p. 485, on this subject remarks: ‘One advantage of wooden rustic work is, that it can be adapted to a great variety of purposes. Thus very beautiful, and even very architectural temples may be formed of unbarked wood. Ornamental doors, every description of garden seats, and flower-baskets, and vases of very elegant forms, may be composed of the same material. Shady walks also, having the shady gloom and enriched effect of a Gothic cloister, may be made of wooden

rustic work: indeed, there is scarcely any kind of garden ornament to which it may not be applied. I allude,' continues this correspondent, 'more particularly to what I call wood mosaic, which is, I believe, rather a modern invention. It is formed of split sticks, of various lengths and sizes, and having bark of different colors. The pieces are nailed to any flat surface of wood, and very beautiful and elaborate patterns may be produced by arranging the pieces according to their sizes and the various colors of their barks. Elegant garden seats, and vases of almost any shape, may be covered with this kind of mosaic work; but as it is not durable when constantly exposed to the weather, it is the most suitable for the inside of summer-houses and garden temples. In such situations, the richest specimens may be introduced, and, if varnished over, they would last for a number of years.'

"In corroboration of this, we may state that there are summer-houses in Dalkeith Park of this description that have stood uninjured for nearly forty years.

"Structures, such as arbors, moss-houses, &c., should be always placed in positions to command a perfect view of some object of interest; indeed, this should not be lost sight of in placing seats and all other appendages, whether for shelter or repose. Some excellent structures of this kind have lately been erected through the very varied grounds at Drumlanrig Castle; and so spacious are some of them, that not only the family and their visitors, but their attendants also, can find shelter in them.

Our first figure in frontispiece is "thatched with heath, attached to the timbers of the roof with tarred cord, but, for appearance sake, secured with four bands of rope made of *Polytrichum commune*, or any other similar strong-growing moss. The interior of the roof is first lathed, as it were, with hazel rods about one inch apart, into the spaces between which mosses of various colors are thrust firmly in; and by so doing, the whole of the roof is completely covered. The different colors may be placed in concentric circles or zones, or in any other pattern the artist chooses. The back and sides, as high as three feet above the seat, are covered with larch, hazel, or other strait-growing rods; and, if divided into panels, the rods may be so arranged as to produce any device desired; and for the purpose of effecting this in a proper manner, that part to be so covered should be lined with boarding, and the device drawn upon it with chalk or black coal. The seat is supported upon rustic legs in front, and to the timbers of the structure behind; it is then covered with planking, and that with small rods similar to the back and sides. The front of the roof is supported upon columns of larch, oak, or any other kind of wood, having the bark on; the arches at top are easily constructed by using two pieces of curved wood; creeping plants are planted at their base, and trained over them and round the circular heads of the doorways. The spaces over the doorways may be either filled in with rods placed closely together, or in open lattice-work, according to taste.

"Fig. 2 (frontispiece) is constructed much in the same manner, only the supports in front are set upon a stone plinth to insure their durability. The seat and covering of the back and sides are covered with rods, laid in what is called the herring-bone fashion, as seen in the sketch. The roof is in two parts, the top part being thatched with reeds, and the lower part, after being boarded over, is covered with rods, so as to

give that portion the appearance of a corrugated roof. The floors of both should be pitched with different colored pebbles set in concrete or cement, and disposed in a tessellated manner."

In almost all sections of our country excellent material for rustic work is easily procured, though we may not be able to find the hazel rods recommended. Our cedars, oaks, and wild grape vine, seem especially designed for this work.

Fig. 3 represents a very pretty and simple form of rustic seat that any person with a little time and skill can make.

In grounds of small extent, bridges can very seldom be introduced; yet we have seen gardens of only a few acres, crossed by a brook, where a rustic bridge would have been the most appropriate and consequently the most beautiful ornament that could be introduced. Nothing associates better with garden scenery than rustic bridges. Mr. LONDON remarks, in *Villa Architecture*, "that bridges are among the noblest structures which can be erected in pleasure grounds; and, unlike rustic seats and root-houses, they maintain this character even when constructed of materials of temporary duration, from their obvious and unquestionable utility. A mere plank or tree, when thrown across a stream, assumes a character of grandeur. It commands respect, from its powers of effecting for man what he could not by any possibility effect for himself."

Fig. 4 is a very pretty bridge when neatly executed. The bearers show a slight curvature. The footway is covered with poles, laid across. The supports beneath are let into the abutments, which are covered with rough stones and wild plants; and although they are securely enough fastened to the bearers above, still they have the appearance of only being tied to them by a grape vine. The same occurs in the hand-rail. The bent pieces which fill the panels should each be in one piece if possible.

Abutments to bridges, as shown in our figure, are not only of great importance to the structure itself, but they show stability and an appearance of safety. When exposed to view, they are also quite in keeping with this style; because it forms, as it were, the connecting link between the architectural and picturesque.

Fig. 5.—Here the abutments are of timber, and so selected as to have an arm or bracket proceeding from them for the support of the footway. These arms will look best if of the natural growth of the tree; otherwise they must be attached in the most natural manner possible. The



Fig. 3.



Fig. 4.

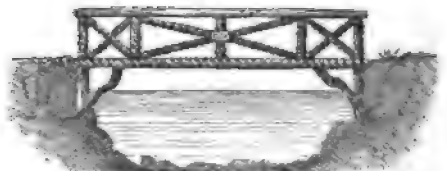


Fig. 5.

outer sides of the outside battens in this bridge, as well as the whole of the hand-rail, should be covered with *Polytrichum commune*, twisted in form of ropes, and neatly

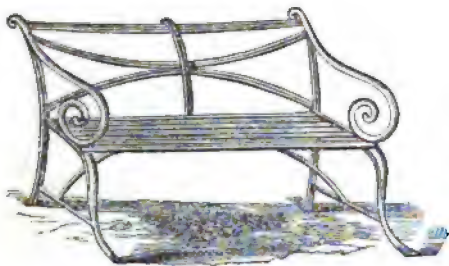


Fig. 6.

wound round the respective parts, and nailed on the face of the battens. The top and principal rails of the hand-rail should have ropes of greater thickness than the diagonal or smaller parts. The supports underneath may be left with their natural bark attached to them.

We have previously observed that very pretty garden seats are made in iron, mostly of cast-iron. We continue our extracts from the *Book of the Garden*, giving two wrought-iron seats, one of which answers the double purpose of a seat and a protection to the tree; also a wire tree-protector, an article much needed for street trees, or where the lawn is grazed :



Fig. 7.

“Metallic chairs are certainly, if we except marble or granite, the most durable ; and the only objection urged against them is oxidation, which is apt to spoil ladies’ dresses. This, however, can easily be got rid of, by painting them annually with anti-corrosion paint.

“Fig. 6 is a wrought-iron chair, greatly admired for its elegant appearance and the comfort and ease of its seat. It is less liable to be broken ; and being lighter than cast-iron chairs of the same size, it is much more easily moved from place to place. Fig. 7 is also of wrought-iron, and adapted to be fixed under the shade of a tree, as shown in our cut. It may be divided into four compartments or not, according to fancy.

“Tree-protectors are used where rabbits or hares abound, and also for protecting single trees from injury by cattle, and are of various forms, and of different material. Those made of small iron rods, or strong wire, are not only the neatest, but the most durable, and by a simple contrivance may be joined by hooks and eyes ; so that they may be removed from one tree to another without being taken to pieces. Fig. 8 represents one form of these.”

We shall give another chapter or two from this work next month. We do this because it contains much valuable information ; and as the work itself is very costly, but few copies will probably reach this country



Fig. 8.

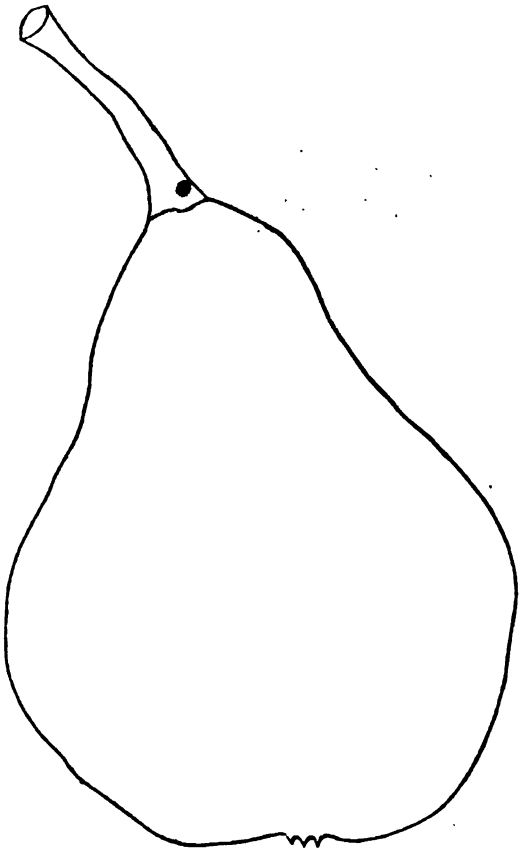
THE DUCHESSE D'ORLEANS PEAR.*

SYNONYM: *Beurré St. Nicholas*.

THE *Duchesse d'Orleans* is ranked unanimously, as far as we are informed by those who have tested it in this country, as one of the best new varieties from abroad. It was first introduced by Mr. KENRICK, and noticed in the seventh edition of his *American Orchardist*. It was first fruited by ROBERT MANNING, of Salem, and within two or three years past in several parts of the country. It is figured and described in the first volume of HOVEY's *Fruits of America*. Withal, we have not been able to trace its origin, and we are inclined to think it is from Germany. It has fruited in our collection three years. The first year we formed a poor opinion of it, but we found afterwards that we injured it by leaving it too long on the tree. Our colored plate was made from a specimen grown by H. P. NORTON, Esq., of Brockport, N. Y., who has had it in bearing for two or three years, and we believe thinks highly of it.

At the Philadelphia Pomological Convention last autumn it was favorably spoken of by Mr. WALKER, Mr. WILDER, Mr. HOVEY, Mr. SAUL, and others; and would have been placed upon the list for general cultivation, only that it was not sufficiently known. It remains on the list of those that promise well.

Fruit—large, average specimens being about $3\frac{1}{2}$ inches long and $2\frac{1}{4}$ inches in diameter at the widest part. Form—oblong pyriform, slightly contracted above the middle, and tapering gradually to the stalk, which is fleshy at the base. Stalk—somewhat variable in length, from $1\frac{1}{4}$ to $1\frac{1}{2}$ inches, pretty stout, and usually enlarged at the extremity. Calyx—small, open, shallow, nearly on the surface. Color—greenish yellow, marked frequently with a delicate russet tint, lightly tinged



* See Frontispiece.

with red in the sun—often a rich bright red—very beautiful. Flesh—melting and juicy, with a delicate and agreeable perfume. We have picked it quite hard and ripened it in the house on the 25th of September, and we think we never had it in a better condition; but its usual season here is the first two weeks in October. It should always be picked in good season and ripened off in the house.

ASIATIC CONIFERS.*

BY JOHN SAUL, WASHINGTON, D. C.

ABIES MORINDA.—This is another beautiful Spruce from the mountains of Northern India. With the preceding it has been much confused, though they are as distinct as the two Silver Firs, *Pindrow*, and *Webbiana*. It is a smaller tree than *Thutrow*—the foliage is shorter and of a lighter hue; it is nevertheless a pretty, graceful species, deserving extensive cultivation, and about as hardy as the *Khutrow Spruce*.

ABIES GRIFFITHIANA; syn. LARIX GRIFFITHIANA.—*The Sikkim Larch*.—A tree of recent introduction. Dr. HOOKER says of it: "The *Larch*, which I propose should bear GRIFFITH's name, occurs in Sikkim and in the valleys of Eastern Nepal, close up to the snow. In the latter country, the Kambacheu Valley, immediately under the Junmu Peak of 25,000 is full of it at 11,000 and 12,000 feet, mixed with *Abies Webbiana*. It rarely exceeds 30 to 40 feet in height, except on shingle banks of Alpine streams, where it sometimes attains 60 feet. It is an inelegant, sparsely-branched tree, and, except for its bright green foliage and resinous cones, unworthy of comparison with the European species." Of the hardiness of this tree there cannot be a doubt, but it is questionable if it be worthy of planting, save among collections or for variety.

ABIES DEODARA; syn. CEDRUS DEODARA.—*The Sacred Cedar of India*.—If there is a person who doubts the extreme beauty and gracefulness of this tree, I will just ask him, has he ever seen one fair, healthy specimen, twenty, thirty, or forty feet in height? (Of these heights, and even higher, there are hundreds now to be seen in England.) If he has, methinks it will more than convince him, that though much has been said and written of its beauty, its true elegance and value were but faintly colored. If in a comparatively young state it should thus arrest the eye and admiration of the ordinary observer, what may we not expect of its beauty when seen on its native mountains, more matured by years? Hence we find travelers without distinction, whether botanists, civilians, or military men, enraptured with its airy elegance, gracefulness, and beauty. A late Governor General of India says: "I want to see them as I often have in India, shooting up their immense trunks to a great height, from whence the branches diverge horizontally, and droop in the most elegant manner." Dr. HOFFMEISTER describes it as "growing in dense and noble forest from Jhalla *via*. Duralee (9,000), Bhyrooghatee (9,500), Gungatree 10,319 feet. Captain HODGSON

* Concluded from June number.

describes it as "flourishing most between 6,000 and 10,000 feet;" but adds that "it occurs above and below those limits." Dr. GERARD measured Deodars of 13 feet in circumference and 140 feet high above the level of 10,600 feet. Major E. MADDEN says: "Although the Deodar abounds and attains a great girth on mountains thirty miles from the plains, all the gigantic specimens occur near the snowy range. On Choor, not one exceeded 17 feet round at 5 feet high; but at Sildes, near Looloot, on the western side of the Changsheel Range, there exists a hollow, flat-crowned patriarch, 36 feet round at 4 from the ground; there is another of the same dimensions near the sacred fish tank below Cheenee, in Koonawur; and at Sheong, on the north face of the Boorun Ghatee, one of 33 feet. Dr. HOFFMEISTER mentions individual specimens above 40 feet in circumference." The Deodara occupies immense tracts of the Himalayas, about the elevations already noted, forming forest of great beauty. As regards situation and soil, Major E. MADDEN says: "It seems very indifferent to site and substance, flourishing equally amongst the clefts of the most scarped rocks, gneiss, quartz, limestone, granite, clay, and mica slates, as in the black vegetable mould of the bræ or glen, provided always the surface of the latter slope to an angle sufficient to ensure thorough drainage." What Major E. MADDEN describes as true of the Deodara in its native habitats, is equally true in cultivation; it will grow in almost any soil or situation, preferring, however, a sandy loam, and demanding good drainage. On its introduction into England it was found to graft freely on the Lebanon, and on it succeeds well; some of the finest specimens at Elvaston Castle are on this stock. Thousands have been also grafted on the *Larch*, on which it takes freely, but is extremely perishable; on the latter stock I have seen them die off at every age, from two or three years grafted to twenty feet in height. This latter cause has, perhaps, led some to speak lightly of the Deodara. At present, few, if any, are worked, seed being procured in abundance, from which any quantity of plants are raised. It is needless to say how infinitely superior they are to the grafted plants. Mr. VEITCH, the eminent English nurseryman, has two varieties of this—one of a rich green foliage, nearly the color of *Sinus insignis*, the other a very robust, strong, growing variety.

ABIES CEDRUS; syn. CEDRUS LIBANI.—The Cedar of Lebanon is so well known that it appears a work of supererogation to either describe or recommend it; still it is not so generally cultivated as it should be. When young it grows slowly, and at all ages transplants badly; when transplanted it never takes freely to grow for two or three years. These causes have operated much against its more general cultivation, particularly with persons that are anxious for a rapid growth. After it fairly takes to growing, I will answer for it, that it is as thrifty, vigorous, and rapid in growth as most ornamental trees. What noble specimens of this tree are to be seen in many parts of Britain! Generally flat-headed, and throwing out their long horizontal sombre branches with an air of solemnity and grandeur. Native of Mount Lebanon and eastward.

PINUS EXCELSA.—In this species we have a near approach to our White Pine (*Pinus strobus*), as well as to the European species, *Pinus cembra*, but the latter tree

is also found in Northern Asia. The leaves of the three species are five in a sheath, and in many characteristics they agree. Their chief points of distinction are these: *cembra* is much slower in growth than either of the others, and has shorter foliage; *excelsa* has much longer foliage than either, more glaucous, and hangs gracefully from the branches; the shoots and branches are stouter and more vigorous, and it is by far the most graceful and beautiful of the three. This Pine proves perfectly hardy in the Middle States. I have seen specimens which have withstood several winters without the slightest protection. Dr. GRIFFITH describes this species as being common in Bhotan, forming large and beautiful woods on Southern aspects, next above *P. longifolia*, and below *Abies Smithiana*, or from 6,000 to 10,000 feet. Major E. MADDEN says: "Between the Shatool Pass and Panwee, as well as below Chansoo, in Koonawur, there are magnificent forests, containing many trees certainly not under 150 feet." Writing on altitude, Major E. MADDEN observes: "We may therefore fix on 5,000 and 12,140 feet above the sea line as the extreme limits of this species." It is very extensively distributed through Bhotan and many other parts of the Himalayas. As this pine is now becoming plentiful and is sold cheap it should be extensively planted.

PINUS LONGIFOLIA.—This beautiful long-leaved species is not hardy in England, and consequently we must not expect it to be hardy here. In the more Southern States it would succeed fine, and it richly deserves the attention of southern cultivators. On its native mountains, the Himalayas, it grows much lower down than most of the other conifers; hence its delicacy. Major E. MADDEN says: "The tree occurs in the greatest perfection and abundance on both mountains (Siyahnee and Binsur), and, indeed, seen from any commanding elevation, Outer and Central Kumaoon and Gurhwal, north to the Pindur, from 2,500 to 7,000 or 7,200 feet elevation, appear little else than one great forest of Cheer* Pine, succeeded at that level by Oaks."

PINUS GERARDIANA.—Though I have grown and seen thousands of this species, I have not yet seen one fair specimen. It is very slow in growth, and though perfectly hardy in Britain, it refuses to grow freely like the other Himalayan Pines. In the Middle and Northern States it will no doubt prove hardy, and I think succeed better than in the moist atmosphere of Britain. Major E. MADDEN says: "When young and on tolerable soil, it grows in a conical form, pretty much in the habit of *P. longifolia*, to the height of about 54 feet, furnished with numerous horizontal branches nearly to the ground; but in the situations which it best loves, rocks and bleak, riven crags, the boughs become excessively crooked, and are twisted in every direction." Capt. A. GERARD found it as high as 12,300, but adds: "This locality, near Soongnum, is, no doubt, its extreme limit: the usual range lies between 5,500 and 10,800 feet. It is generally associated with *Cedrus deodara*."

CUNNINGHAMIA SINENSES; syn. CUNNINGHAMIA LANCEOLATA.—This tree is but sparingly planted by cultivators even in England. I do not tell why, as it is exceedingly distinct, and forms an admirable contrast with other conifers. In Britain there is none more hardy. Perhaps one cause is, but few living plants are offered for

* Its native name.

sale, and cuttings never make handsome specimens. In the catalogue of conifers published by the Horticultural Society of London it is described as a small tree. Mr. FORTUNE, who has seen it on its native mountains, says: "The sides of the mountains here were clothed with dense woods of the lance-leaved Pine, (*Cunninghamia lanceolata*). This was the first time I had seen this Fir tree of sufficient size to render it of value for its timber. Many of the specimens were at least 80 feet in height, and perfectly straight. There was a richness, too, in the appearance of its foliage which I had never seen before; sometimes it was of a deep green color, while at others it was of a bluish tint. There are doubtless many varieties of this tree among these hills." Native of Southern China.

SALISBORIA ADIANTIFOLIA.—The *Ginkgo* or *Maidenhair* tree is well known in this country, where it grows more rapidly and thriftily than in any part of Britain. This is probably owing to our fine warm summers, which are like those of its native land. Here is one among the many plants which prove that the plants of Northern China will be more at home and do better with us than in England. Whoever plants only a few trees should include this among them. The lamented Mr. DOWNING had a handsome specimen in his lawn. Native of Northern China and Japan.

CEPHALOTAXUS PEDUNCULATA; *syn.* *TAXUS HARRINGTONIA*.—A pretty Yew tree from Japan, which proves quite hardy in Britain, and in all probability will in this country. It promises to be a handsome and useful species, but the plants in cultivation are small.

CEPHALOTAXUS FORTUNII.—A very beautiful Yew from the north of China, where it was discovered by Mr. FORTUNE. Dr. LINDLEY says: "In the absence of a well grown plant, little or nothing can be said of this tree, save that it is stated by Mr. FORTUNE to grow to a height of from 40 to 80 feet. Its branches are probably spreading or drooping, obscurely streaked or furrowed distichous, pale brown, slender; leaves quite distichous, alternate or opposite, close together, three to four inches long, linear, tapering a little at the base, much and gradually acuminate, one-nerved, dark and full green above, paler beneath." Perfectly hardy in England.

TORREYA NUCIFERA; *syn.* *TAXUS NUCIFERA*.—The plants in cultivation are small, consequently little or nothing can be said of its beauty or habit. "It looks well," (as cultivators say.) Said to be a small tree from Japan.

TAXUS ADPRESSA.—A very pretty and distinct Yew from Japan. Judging from appearance, I should think it would not be larger than a bush. It is very beautiful, but I fear will not prove hardy in this country.

* Paxton's Flower Garden.—Vol. I, p. 58.



LAWNS AND GRASSES.

BY L. DURAND, DERBY, CT.

IN my article in the May number of the *Horticulturist*, on "Cultivation of Grasses," I made a few closing remarks on Lawns, and their management. Since writing the article in question, I have thought something more definite might be said on the subject, to advantage.

Lawns connected with country houses will vary in extent from half an acre to several acres, as the case may be, although, in this country of "land saving," there will be very little danger of getting the lawn too large, even if it should include twenty, thirty, or forty acres in extent. Where the house and farm buildings can stand near the central point of the lawn, it will be better if it has a high and commanding aspect; however, that must depend on circumstances, as the highest point on the lawn will be the best for the buildings to stand upon, whether that be upon one side or central. It will be well, where the builder is designing a new place for a residence, to select a point near or in the midst of a belt or grove of forest trees. This he will find to be a great advantage over building on an open place where he has got to wait a short life time for small trees to grow up to make shade. In such cases, however, of barren points, some trees of a large growth should be immediately transplanted about the buildings.

As to the general management of lawns, it must vary according to the size, situation, circumstances of the owner, &c. Of course the general design of a lawn is to remain in permanent grass and growing trees. And in the first place, whatever the size of the lawn, whether it be one acre or twenty, we would have but one outside fence or enclosure. All cross sections of fences have a bad look and spoils the prospect. Wire or iron fences are the most substantial, look the best, and are the cheapest for a life time, that can be built.

The laying out and preparing a lawn for seeding down to grass, requires a great deal of labor and judgment to have it well done. The land should be plowed deep, subsoiled, and well pulverized; the surface should be made smooth with a fine tooth harrow and rakes. By this, we do not mean to pull down natural hills or conical knolls, to fill up a natural valley or ravine. We should much prefer to have the land remain in its natural state as to form of surface or position. The kinds of grass seed to be sown should be a mixture of Red Top, Kentucky Blue Grass, and White Clover, sown with a liberal hand, and this to be covered with a fine tooth harrow or hand rake, and the whole surface to be made smooth by the roller.

Where lawns are only an acre or so in extent, the after-cultivation can be done by shearing, or mowing with a "lawn scythe." This tool can be had at any of the "implement stores," and in the hands of a competent man good work can be done. But mowing a swath with the ordinary scythe is one thing, and cutting or shearing with a "lawn scythe" is another business altogether. The grass should be cut once or twice a month through the growing season, and it should be cut even and alike;

for it is only in this way that a close, tight sward can be obtained, and that after two or three seasons of experiment and growth. They understand this business better in England than we do, because they have done more at it; still we can by a little practice learn enough to answer all useful purposes.

Where the lawns are several acres in extent, the practice of cutting with a scythe would be slow, laborious, and expensive. In this case, we think that the grass might be fed down by sheep. This could be done by enclosing the sheep with a cheap wire hurdle fence, to be moved over the lawn as the grass is fed down, and so after the ground is all gone over the first plot will be ready for the sheep again. Then the sheep would scatter their droppings, or manure, over the surface, and it being of such a fine quality it would be the best top-dressing the lawn could have.

In my former article on grasses, I forgot to mention Orchard grass as being a kind of grass which is worthy the attention of persons generally for cultivation. This is one of the earliest in the season of all cultivated grasses, and for this reason it is worthy the attention of the farmer to cultivate it for early feed. In ordinary seasons it will be from four to five inches high by the 20th of May, so that cattle can get a good bite and fill themselves; and by the 10th or 15th of June it will be fit to cut for hay, as it will be in full bloom. We consider it worth more for pasture, as like clover it will grow up as often as it is fed down. The greatest difficulty is in getting a good catch of the seed when sown, as it is very apt to come up in separate tufts or patches. But where it covers the ground well it grows more rapid, and furnishes more feed in a given time than clover. Cattle like it, we think, quite as well as they do clover, and it should be fed down as often as it grows up through the season.

VINE BORDERS.

BY H. W. S. CLEVELAND, BURLINGTON, N. J.

A CONTROVERSY has arisen of late years relative to the use of slaughter-house manures, carcasses of animals, &c., as a material in the composition of vine borders. The practice has been violently assailed, and we have been assured by high authorities that not only should we thus destroy the roots of our vines but that the presence of such matter would render the soil a sodden mass which they never could penetrate or thrive in. Much of the difference of opinion on the subject (as usual in controversies) has been caused by a misunderstanding. The best authorities I have seen in favor of the practice, do not recommend a direct application of such material to the roots of a growing vine, but only that it should be placed where the roots should find it when it was properly decomposed and fit for their use. To this, the others reply that the roots have no power of selection but must of necessity go ahead, and when they run foul of this stuff it will certainly kill them. A little reflection will upset this theory. We know that roots grow by sending out fibres, which at first are exceedingly fine but increase in size by the nourishment they meet with in their course. If one of these

fibres strikes a rich bed of wholesome food it will grow fast, and as it grows will send out more fibres, and finally become a large, strong root, carrying nourishment to the vine. If, on the contrary, it meets with unwholesome matter, it cannot grow and it may be killed; but the death of a hundred of these exceedingly minute extremities would not affect the vine, with thousands of them on every root. It is not true, therefore, that a root has no power of selection, for these fibres are in fact *feelers* which are ready to seize upon anything valuable, or to stop short if they meet with injurious matter. Now, if the carcass of an animal were put into a vine border, and a large root of a vine spread out directly upon it, there is no doubt the root would be destroyed and, perhaps, the vine killed. The same effect would be produced if the root was put into a bed of clear guano. The manure in both cases would be too strong for it; but no proof can thence be drawn that either of them is not a good manure for vines if properly used. The case seems so simple that I have wondered that so much difference of opinion could have arisen.

But as experience is the best teacher, I wish to give you an account of what I have seen to-day, bearing upon the question. My vine border was prepared nine years ago, and was composed of old sod, shoe-makers' chips, oyster shells, and all the bones and carcasses I could get hold of. This was done in the fall, and the vines planted the following spring. As all the fresh animal matter was buried at least eighteen inches deep, and the vines were small when planted, I had no fear of its not being thoroughly decomposed before they would find it. At all events I have had no reason to imagine, from their appearance or produce up to this time, that they have been troubled with indigestion or dyspepsia. The next year finding a horse which had to be killed, I had him brought to my vine border, where he was shot and fell into the grave which was previously prepared for him. This was certainly complying with HOARE's directions—that the bones, for a vine border, should be put in "as whole and fresh as possible." The spot where he was buried was on the extreme outer edge of the border, twelve feet from the front of the house, and in order to put him deep enough to avoid all danger from effluvia, I had to dig considerably deeper into the subsoil than the border was originally made. In making this pit I found no roots and therefore felt no fear of injuring the vines, having firm faith that they would keep clear of him till he was ready for them.

I have for several days past been engaged in enlarging my border, adding six feet in width and making it considerably deeper than the portion which was first made, digging in towards the house till I came to roots. This morning I came to the remains of the horse above mentioned, and was first notified of it by coming upon a mass of rich mold in the midst of the yellow subsoil, deeper down than the other border, and filled with fibrous roots. I immediately changed my spade for a trowel, and began a careful examination. All the earth where the body had lain was like a very rich garden mold—*much more mellow and friable than the yellow soil around it*—and all this mold was filled with vine roots, large and small, in the healthiest possible condition, while every bone was enveloped with a perfect net-work of gauze-like fibres. I continued my examination further, perhaps, than was proper for the health

of the vine, because I thought it important as evidence, and the result was such as to leave no doubt in my mind that decomposed animal matter was a valuable manure for vines, and that there need be no fear of rendering the border "a sodden mass of unctious matter" by using it freely and as fresh as possible.

[We thank Mr. CLEVELAND for his account of this interesting and very conclusive experiment. That good grapes and heavy crops can be obtained without dead carcasses we have had abundant proof, and that such carcasses can be safely, *if judiciously*, used, we have not a doubt.—ED.]

ORCHIDS, AND THEIR MANAGEMENT.

BY ORCHIS.

Those who have had an opportunity to visit an Orchid house in England, where this tribe of plants is much admired, have beheld a display of curious and beautiful flowers that afford the highest gratification. As yet, taste in this country is not sufficiently advanced to induce the wealthy to make large collections of these plants; still, it is gratifying to see some fair collections around our large cities. As Orchids are not difficult to grow under glass, it does seem neglectful in those who seem to take an interest in horticultural pursuits to be silent on their cultivation. This class of plants cannot be grown with much success among other plants. They require a separate house, but it does not require a large one to contain a fine collection of Orchids. The house should be neat, and must be strong, as many of the plants do best suspended from the roof in neatly made baskets. By passing an iron chain round the roof, attached to the rafters, the baskets can be secured to this chain by means of strong iron hooks, hung so that the leaves will be about two feet from the glass. It would be advisable to plant some of the finest stone climbers so that they could be trained to the roof. Deciduous plants are best for this purpose, as they admit more light than other plants. It would be advantageous to have a large tank in the house, situated so that the water would be exposed to the warm atmosphere of the house.

It may be taken for a rule that Orchids do best when grown in a light peat, but where this is not to be had, any other substance of a light, porous nature will answer. Those plants that should be grown in wire baskets and hung from the roof are the *Stanhopeas*, and all plants that throw their flower stalks down, as it were, from the basket, instead of growing upwards. I have known plants of this kind potted in common pots, but from their peculiar habit of flowering, nothing could be seen but their leaves until they were put into baskets and suspended.

Miltonia spectabilis, *Lycaste Skinnerii*, and all such plants as throw out small, creeping roots, do best in large, flat pans, five or six feet in circumference, and six inches high. By potting in the center in an elevated position, and by keeping the roots covered with moss as they grow, they will become fine specimens.

Ærides odorata, *Dendrobium nobile*, and plants of similar habits, must not be put into pots or baskets, as they do best on rough logs of soft wood cut horizontally at one end, so that they will stand like pots. By placing the plants among the rough stumps, and covering the roots with moss, excellent plants will be grown of all those varieties that derive nourishment solely from the atmosphere.

Cattleya crispa, *Zygopetalea*, *Mackayii maxillaria*, *aromatica*, and similar stiff-rooted plants, will do best in pots, but the pots must be half filled with potsherds. Care must be taken not to use any thing in potting that will be likely to stagnate in the course of two years, as these plants will not require shifting as often as other plants. *Nepenthes distillatoria*, *Rhodriguezia secunda* are well suited to be grown by the pillars of the house, as they grow to a great height when they have room.

The thermometer in an Orchid house in winter should not be allowed to fall lower than sixty, and in summer there should be a covering of some light texture for a shade. It is not well to withhold water altogether in the winter, as some do, as many of the plants continue to grow, although not as rapidly as in summer. The plants that require total rest are such as have reedy stems; these, after the plant has flowered, lie down, which is a sure sign that the roots should be laid down in some cool, dry place, until it again shows signs of growing, when it must be put in peat and supplied with moisture, as its growth may require.

CHEMISTRY OF HORTICULTURE.

BY J. S. HOUGHTON, M. D., PHILADELPHIA.

COMPOSTING SOILS.—Gardeners generally prepare their soils, so far as my observation has extended, in a very practical way, with little or no attention to the chemical principles involved in the operation. They have learned, by long experience, that a partially rotted sod makes the best general soil that can be obtained. Farmers know that a clover sod plowed under makes good manuring for corn; but farmers seldom, if ever, make a compost of sods for their gardens or manure heaps. Gardeners are clearly ahead of farmers in their method of cultivation and fertilization, but they are by no means up to the standard of modern science in their preparation and management of soils.

How to rot or decompose a heap of sods, has long been the study of gardeners. Some let it lie in a heap, with occasional turnings and choppings, for two or three years. Others, finding that the use of lime and the access of air hastened decay, put up the heap with lime, and used sticks or pieces of timber to separate the mass and admit air. Others tried the addition of heating dung and water.

Now all these methods are slow and imperfect. That they are slow and tedious, all who have tried them well know; that they are imperfect, I will endeavor to prove.

It is well known that plants can receive nutriment only in the form of a fluid or a

gas. No solid particles of matter, of any description, can enter the circulation of plants. Hence, everything intended for their use must be capable of being dissolved in water, or of being converted into a gas, when needed. Now if a sod, though rich in fertilizing materials, be not completely rotted or decomposed, or in a state to become fully rotted and decomposed, it follows that its constituents can not possibly become immediately useful. Clover contains many valuable fertilizing ingredients; but until these ingredients become changed from the form of clover into their chemical elements, (lime, potash, soda, &c.,) they can not be appropriated by plants. Again, even if the clover be decomposed, and the chemical elements remain in such relations that they are *insoluble* in water, or not capable of readily becoming *gases*, they can not be made *available* in the garden. Of course it will be seen at once that under such circumstances a gardener may have a heap of rich material, and yet, if it is not available, it is no better for present use than a poor heap.

The imperfection of the process commonly adopted in composting garden soils consists in several points. First, where all the soil is *fresh*, there is no well decomposed matter of a carbonaceous character to act as an *absorbent* of the gases generated by the act of decomposition, and hence much valuable material (ammonia) is lost. In all such compost heaps a quantity of well decomposed turf or black, garden soil should be mixed with the new soil, to catch the ammonia produced by the decay of the new soil or sod. Again, much valuable time and labor is lost by the slow decay of sod where no chemical agent is employed to assist the decomposition. Lime is an objectionable agent, because, when freely used, it *locks up* nearly as much fertilizing material as it liberates. Stable manure, in a state of rapid decay, or high heat, is not so objectionable as lime; but this is not the best material for this purpose. Water in moderate quantities is highly important; but with this should be used *potash*—the common potash of the shops—which decomposes all vegetable matter rapidly and powerfully, and does not lock it up in new combinations as lime does, but on the contrary sets free even those combinations which lime renders insoluble.

With solutions of potash in water, any heap of sod or other vegetable matter may be decomposed as rapidly as the operator may desire, and all the constituents of the heap will be placed in a state easily soluble in water, or ready to become gases, on the slightest action of water and vegetable life. Indeed, the ingredients of plants are by potash converted in great measure into gases; and if there be present vegetable charcoal, (black loam,) or animal charcoal, (bone black,) or clay, these gases will be caught up and retained till taken up by plants. No organized vegetable body can resist the action of potash; it must decay, and resolve itself into its original elements at its touch. In fact, it is not necessary that the potash should *touch* the substance of the vegetable; it acts by its mere *presence* in a near part of the heap, *disposing* not only that matter which it touches, but all other matter in contact with that which it affects, to decay. "Rot makes rot," is an old adage; and so it is in an especial manner with the rot caused by potash.

All who undertake the cultivation of the earth, either in the field or the garden, should bear in mind these important principles. You may have rich fields, but their

riches may not be available to plants. Ashes or potash may be highly important to bring your peat, turf, meadow mud, raw coarse manure, sod heaps, &c., into efficient action. Lime is useful in small quantities, and so is salt; but I consider large quantities of lime dangerous for many reasons beside that mentioned above. Potash is worth its cost as a manure independent of its power as a decomposing agent, and in garden work it is indispensable. Applied in solution, in free quantities of water, it will bring a sod heap into a better state in sixty days than two years of rotting and turning will effect by the old methods without it.

[This question concerning the management of composts is one in which we have personally a very great interest, some thousands of loads being made annually on our premises. It is a question, too, full of importance to every cultivator; for no matter what our soil be, or where we live, or what we cultivate—whether it be wheat, or corn, or potatoes, or trees, or shrubs, or flowers—fertilizing composts we must have, and that in abundance, as we hope for successful and profitable results.

We have never used potash, but we have not a doubt of its efficacy or of its value, especially where fresh materials are to be brought speedily into a fit condition for use.

We always aim at having our composts at least a year old. They are made up of alternate layers of stable manure, fresh sods from end lands, swamp muck, leaves, street cleanings, weeds, an occasional sprinkling of lime, and everything, we believe, but stones. The heap is subjected to several turnings and mixings during the season, so that when we haul it out for use it is a soft pasty mold.

We shall be glad to have this subject thoroughly discussed in our columns, both by practical and scientific men.



Foreign Notices.

GARDEN WALKS.—The comfort and enjoyment of a garden, especially in our moist climate, depend in a great degree upon the condition of its walks; for unless these are smooth, firm, and dry, they can scarcely be passed over during a large portion of the year except in very fine weather, and rarely indeed by invalids, more especially at those times when gardens are most enjoyable, viz. morning and evenings, as well as after showers. A main feature in the formation of a garden should therefore be walks so made that they could be walked on in all weathers with comparative comfort.

In forming walks, the first thing is to determine the position of the verges. In doing this it must be kept constantly in view that in nearly every case, whether on level ground, ascending or descending inequalities of surface, the verges at right angles across the walk should be on the same level, and for the following reasons: *First*, each half of the walk will receive only its due proportion of rain, which tends in so many instances to disfigure and disturb the surface; *secondly*, walks so made will be found more agreeable to walk on than if they had an inclination from one verge to the other; and *lastly*, by this arrangement the eye of taste will neither be offended or annoyed. The mind will receive that kind of satisfaction which it derives from looking at a perfect architectural elevation, and to affect this appears to me equally important in matters of gardening as in those of building, especially where the utmost refinement in the art is aimed at.

The next point to be considered is to make provision for carrying off water, and this should be so contrived as to meet the maximum amount of our atmospheric precipitations, particularly where the inclinations are rapid and of great length; on level surfaces and when the natural soil is loose and friable, this will not be so urgent, provided the walks are otherwise properly formed. The best material to use for conveying the water will be the earthenware tubing now so well known everywhere, and of a diameter in proportion to the width of the walk and the length the water may have to run before it is discharged. This will be easily determined by persons accustomed to such matters, or at all acquainted with draining. The most convenient place to lay the tubing will be in the center of the walk, with communicating tubes to the sides, where square cesspools about nine inches square and eighteen inches deep, built in brickwork, should be formed to receive the water and sand or other earthy matters which may be carried along with it. The water will pass into the drain near the surface of these cesspools. A grating fitted into a stone frame must be placed over each cesspool, so that by lifting up the grating the cesspool may be readily cleaned out; where the walk takes a precipitate fall, and for a considerable distance, provision must be made for the water to run in before it reaches the gutters, without allowing it to rut the gravel. This can be effected by means of surface guttering both sides of the walk with tiles made for the purpose, or where sea pebbles abound these may be used with good effect. One of the main points which conduces so largely to the beauty of a garden is the perfect keeping of the walks, and unless precautions are taken in their first construction to guard against those natural and unavoidable causes which disturb the surface, there must be continual repairing and unsightly patching, producing at best a most unsatisfactory result, which a little extra trouble in the first instance would have effectually obviated.

The materials of which walks should be formed is a subject depending in some measure upon the geological formation of the neighborhood; for where the most fitting material is not readily accessible, few are inclined to incur the expense of distant carriage, although railroads have in many instances assisted in this matter. In nearly every part of the country some kind of rough

and hard material can be had, such as broken stones, rubble, or even clinkers constitute a good foundation. Walks for ordinary purposes do not, as some imagine, require a great depth of bottom, beneath the fine gravel which constitutes the finish; nine inches in most cases will be found ample. This foundation has been mistaken by many for drainage, but no such thing is meant, as the surface of the walk when finished ought to carry the rain to the sides; as little as possible should be absorbed by the gravel, because where there is great traffic, in a short time the walks would become a complete puddle, and hence the necessity of rendering the surface impervious to wet. This has induced many persons to cover the tops of their walks with concrete or asphalt, but when good gravel can be procured at a reasonable expense, I think under all circumstances it is to be preferred. It is more congenial to our feelings and harmonises better with the surrounding scenery of the garden. Under particular circumstances necessity will suggest other expedients, but then let necessity also justify their use. Two inches of fine screened gravel are sufficient wherewith to cover the surface as a finish to the whole, and where this is found to be an expensive article, one inch carefully laid on will suffice. Therefore when the cost of a cubic yard of gravel is known, it will be easy to ascertain exactly the expense of coating any given extent of garden walks.

I shall now direct attention to the form which the surface of walks should have when finished. This I apprehend has been but little understood by those who have attempted to lay down rules for our guidance, inasmuch as certain requirements, as well as peculiar situations, have a considerable influence in the matter.

Perfectly level walks, like the floors of a house, are not only more agreeable to walk on, but they are also strictly in conformity with good taste in geometrical gardening, where sculptural and architectural decorations prevail, and indeed in all kinds of gardening; the only plea that can justify a deviation from this rule is, that our garden walks are exposed to the atmosphere, while the floors of our houses are protected. To render walks available, therefore, for the purposes for which they are introduced, becomes a matter of primary import, otherwise the level rule might be made absolute, as is the perpendicular in the elevation of a building. Now on terraces surrounding buildings, and in elaborate parterres similarly or identically circumstanced, the nearer walks approach a level surface, just in proportion will a mind imbued with taste and a correct eye appreciate their execution. Walks so laid down are only available in perfectly dry weather. Situations which are elevated, either naturally or artificially, and thus rendered perfectly dry, afford the best opportunities for a close approximation to this rule. It must be stated also, that even in situations where the traffic over them is considerable, they will soon cease to afford either comfort or enjoyment. Necessity, therefore, compels the adoption of a surface less or more convex as the circumstances may appear to demand. Walks in private gardens are little used in wet weather, and therefore they are not likely to be much disturbed at such a period, which is the time above all others when excessive traffic breaks up their surface. The water does not pass off, but is held in the loose gravel until they become almost impassable, which is in fact the case in all public walks so constructed, as was formerly notoriously exemplified in the Society's Garden on wet exhibition days previous to their being altered. It therefore becomes clear that situation, and the uses for which walks are required, should materially influence the operator as to the proportion of convexity which they should receive.

Some entertain an idea that walks should only maintain a very subordinate position in garden arrangements, that they should be kept as much as possible out of sight, and that their appearance should be only a matter of necessity; but such notions are only applicable to garden wildernesses, and have no relation to gardening as an *art of design*. It might be urged, with quite as much consistency, that the door of a mansion should be hidden or obscured, being only a means to an end. Those at all acquainted with the classical and decorative style adopted in some of the best examples of Continental gardening will readily understand this, where indeed walks constitute quite as important a feature in geometrical gardening as windows do in the elevation of a building; they illustrate in fact a material part in the composition. Divest a garden of walks, and the main lines which mark out its form and proportions are destroyed. As roads are to a country evidences of the degree of its civilization, so walks in a garden are indications of the amount of artistic skill brought to bear upon it. Take as an example a garden planted with all possible

taste, and with the most decorative flowers which can be selected, and I would ask what satisfaction could such an arrangement produce in a mind cultivated and refined by a high social position, or how could such a garden be enjoyed! Walks contrasting with turf and flowers, conduce to a harmony in the composition which the two latter of themselves never could accomplish. Where artistic gardening has been carried to its utmost limits consistent with propriety and good taste, and where numerous architectural and sculptural embellishments have been introduced, walks are then frequently elevated above the general level. To accomplish this, stone edgings have in some instances been used, and in others, where the style admits of more elaborate embellishment, walls of solid masonry as edgings have been employed in order to raise the walks above the level of the garden, so that the eye may look down upon the flower beds, and more perfectly view the general arrangement and design.

It has been attempted by some to lay down rules as to the direction which walks should take, and also their width; such, however, can be of little service, as local circumstances must nearly in every instance determine this. It may be stated, however, as a principle, that where walks take a straight direction and are level, or upon a uniform inclination, the width must bear a relative proportion to the length; for example, a walk ten feet wide may look very well if the length does not exceed two hundred feet; but supposing it to be two thousand feet, the proportion would then be entirely destroyed. These, and other matters of detail, must be left to the operator. R. GLENDINNING, F.H.S., in *Journal of the Horticultural Society, London*.

KITCHEN GARDEN REFORM IN ENGLAND.—In our travels in Europe nothing in relation to gardening struck us more forcibly than the superiority of French, Belgium, and Dutch garden vegetables over those of England, and of the greater skill and economy of continental kitchen gardeners. We have heretofore alluded to this matter frequently, both in this journal and the *Genesee Farmer*. We find that the London Horticultural Society has turned its attention to this point, and now admits the display of kitchen garden produce at its monthly meetings in Regent street. The *Gardeners' Chronicle* remarks:

"The truth is, that for many years past—for more than a quarter of a century—the cultivation of esculent vegetables has been regarded as a branch of horticulture altogether inferior to that of flowers. No encouragement has been offered to the former at the great metropolitan shows; in country places esculents have been only looked for from the hands of peasants; and everything has been sacrificed to the showy but unsubstantial decorations of my lady's drawing-room. Not that we would undervalue the latter in the slightest particular; on the contrary, they richly deserve all the patronage they have received; for, after all, they represent the highest possible amount of horticultural skill, and pre-eminently contribute to the perfection of the art of gardening. They have become, too, like our race-horses and our prize cattle, the envy and amazement of all other nations, who in vain endeavor to rival us; so that it is not too much to call them symbols of Anglo-Saxon skill and energy. We have therefore uniformly given them all honor, and we shall never cease to do so.

"But we feel, with others, that in our eagerness to worship the beautiful we have too much forgotten the useful. Our gardens are like too many of our peasant schools; in our anxiety to disseminate learning, we forget to teach the arts which give people value as servants, or wives, or husbands. A girl is taught to read and write, but not to make a pudding or get up linen; a boy is pushed on in his cyphering, but can neither groom a horse nor wait at table. In like manner, a gardener is made proficient in getting up a 'specimen plant,' but knows nothing of a crop of Onions; he can grow an Orchid at Christmas, but a Lettuce then is beyond his skill.

"It is to put an end to this state of things that the new regulations of the Horticultural Society have been especially framed; and we earnestly trust they will succeed. It has been painful to see to how low a pass kitchen gardening in private gardens has sometimes come; and how unconscious people are of their own condition. The contrast between British and foreign kitchen garden produce, as seen in Regent Street, has been unfavorable to us, all possible allowance having been made for climate. Let us hope that better times are coming, and that by degrees the por-

ductions of our kitchen gardens will equal in excellence those of the fruit and flower garden. There are no finer Grapes in the world than the English; no country approaches us in decorative gardening. Why, then, can we not have Cabbages, and Lettuces, and Celery, roots of all sorts, and herbs of all sorts, equally worthy of Englishmen! Surely the country gardeners, who are most concerned in this question, have the same energy as those of London; the spirit of emulation cannot but be as strong in the provinces as in the suburbs of a great metropolis; and we will not believe, till the experiment now in progress shall have failed, which will never happen, that a kitchen garden is the limbo to which all the blockheads of horticulture are specially consigned.

"On Tuesday, the 24th of May, medals are offered for the 'best collection of vegetables.' It concerns the honor of gardeners that these prizes shall be well contested. Another opportunity occurs on the 28th of June, and a third on the 26th July; and there are now offered, in addition to the Society's medals, two prizes, of three guineas and two guineas each, to the gardeners who, having exhibited *English produce on each occasion*, shall be found to stand highest at the end of the third meeting."

THE Exhibition of the London Horticultural Society on the 14th of May last was one of the most brilliant that has ever been held there in the spring. We copy below what the *Gardeners' Chronicle* says of it, and extract from the detailed account of objects exhibited the parts relating to *Azaleas*, *Rhododendrons*, *Roses*, and *Pelargoniums*—plants of the most general interest on this side of the water:

"AZALEAS nearly filled one side of a long tent; and as the plants were large and extremely well flowered, the effect of such a bank of floral beauty, of almost every tint and color, may well be conceived. MRS. LAWRENCE sent twelve excellent plants, consisting of Perryana, Gledstanesi, Rawsoni, Duke of Devonshire, Grenville, Double Red, variegata, macrantha purpurea, sinensis, Broughtoni, decora, and triumphans. In the class of six varieties, Mr. CARSON sent variegata, Double Red, lateritia, Smithi coccinea, speciosissima, and Broughtoni. MESSRS. FRASER had speciosissima, Minerva, sinensis, Smithi coccinea, Double Red, and violacea superba. MESSRS. LANE produced punctata, lateritia, and variegata (united in one plant), mirabilis, picturata, Double Red, and speciosissima. Mr. FALCONER, of Cheam, contributed magna, variegata, Bianca, Rawsoni, Falconeri, and lateritia; and finally, Mr. OVER sent præstantissima, Murrayana, the pale variety of sinensis, optima, carnea, and formosa elegans. Newer kinds in 8-inch pots were furnished by MESSRS. TAYLOR, ROLLISSON, and LANE. The best of these were Iveryana, white, occasionally striped with pink; Grieswoodiana, impressa, a semi-double variety of magnifica, perfecta elegans, obbata, and Jenkinsoni superba; none of them, however, except Iveryana, could be said to equal either in shape or appearance, to such sorts as Perryana, or even older kinds than that.

"RHODODENDRONS.—These were well exhibited by MESSRS. IVISON, GAINES, and LANE, and constituted by no means an unimportant feature of the show. It may be interesting to know that the spotted white and rose-colored sorts sent by Mr. IVISON, and which were so much admired, were part of the same batch of seedlings raised at Sion from which the fine varieties Cliveanum, Perryanum, Sionense, and Duchess of Northumberland originated, and to which they bear considerable resemblance, one of them being more distinctly marked than Cliveanum, and another producing even finer trusses of flowers than that variety. The group contained a scarlet one, which appeared to be an improvement on alta-clerense in point of color. We understand that owing to the lateness of the present season, the whole of these fine hybrids have escaped the frosts, and are flowering out of doors quite uninjured at Sion. Mr. GAINES had aureum, perpureum, floribundum, magnificum, roseum majus, and maculatum album. Of these magnificum is a nice light kind, with compact heads of flowers, which are richly spotted in the upper petals with deep crimson. MESSRS. LANE sent a large plant of Gibsoni *alias* formosa, which, however, suffered much in the course of the day from the coldness of the wind. They also showed a good yellow called Aureum superbum; Delicatum, a pink sort, spotted in the upper petals with yellow; Primulinum elegans, a good yellow; Jenkinsoni, pink with orange spots; and Aureum.

"Roses in pots were wonderfully fine, considering the unfavorable season we have had for such plants. Both those from amateurs and nurserymen were extremely well grown and bloomed, and the proper colors of the flowers were well brought out. We need not say, therefore, that they attracted much attention. In the class of private growers, Mr. TERRY, gr. to Lady PULLER, of Youngsbury, Herts, was first; and A. ROWLAND, Esq., of Lewisham, second. The nurserymen who showed were Messrs. LANK, PAUL, and FRANCIS, and they were awarded in the order in which their names appear. Among the different varieties produced, none excelled the well known favorites, Charles Duval, Coupe d'Hebé, Blairii, Chénédolé, Devoniensta, Niphetos, Bougère, Augustine Mouchelet, Barone Prevost, Mrs. Elliott, Aubernon, Duchess of Sutherland, Queen, Madame de St. Joseph, Paul Perras, Souvenir de la Malmaison, and William Jesse; among sorts more recently brought into notice were the glorious Géant des Batailles, Caroline de Sausal, Souvenir d'un Ami, and Vicomtesse Decazea. Mr. FRANCIS had some nice little plants in small pots; they were worked on the Manetii stock, which is found to answer well for that purpose.

"PFLANZEN, on the whole, were hardly sufficiently forward. The collection to which the first prize was awarded, however, was an exception, for it was loaded with large and fine blooms, possessing the highest color, showing that with skill the difficulties of an adverse spring may be surmounted. The Gold Medal for the best twelve was awarded to Mr. TURNER, of Slough, for Colonel of the Bluffs, Magnet, Mochanna, Chieftan, Constance, Alonzo, Rosamond, Gulielma, Rowena, Virgin Queen, and Pride of the Isles; 2d, Mr. DONSON, of Isleworth, with Arethusa, Purpleum Rosa, Rosamond, Virgin Queen, Leader, Ambassador, Chloe, Vanguard, Harriet, Leah, and Governor; 3d, Mr. WESTWOOD; 4th, Mr. GAINES. In these two groups we remarked Flying Dutchman, First of May, Rubens Celia, Star, and Salamander."

THE DWARF CRIMSON CHINESE AZALEA (*Azalea amana*).—This Dwarf Crimson Azalea must be a beautiful plant, and will, we think, prove *hardy* in a large portion of this country. It is described as follows in *Paxton's Flower Garden*:

"This is a dwarf evergreen bush, resembling *Rhododendron ferrugineum* in habit. The branches when young are closely covered with long thin white ramentaceous scales; when old they are brown and coarsely hairy. The leaves are as small as those of Box, flat, obovate, very round at point, coarsely hairy, paler on the under side. The flowers are rich crimson, almost campanulate, tolerably regularly five-lobed, with that kind of double corolla which is called 'hose in hose.' No calyx is discoverable; but whether that organ is absent, or is converted into the external corolla, is uncertain.

"A specimen was exhibited to the Horticultural Society on April the 23d, by Messrs. STANDISH and NOBLE, of Bagshot, with whom it had flowered, on which occasion it was distinguished by a Silver Knightian medal. Branches, uninjured by cold, were produced from a plant which had been exposed during the whole winter without protection; and the species is expected to be perfectly hardy. Mr. FORTUNE has communicated the following information concerning it:

"This pretty Azalea was found in a nursery near Shanghai, and has been brought from the far-famed city of Sho-chow-foo. Further than this its origin is unknown. It is no doubt a very distinct species, and probably comes from a country further north than any of its race in China, or, at all events, from a higher elevation on the mountains. As a green-house plant in this country it will be greatly prized. The striking form and novel color of its flowers, its small leaves and neat habit, will render it most desirable for bouquets and for decorative purposes. But it is not unlikely that it may prove perfectly hardy in our climate; indeed it stood out in the Bagshot Nursery last winter, without the slightest protection, and flowered most profusely last spring. We may, therefore, hope to have, in time, a race of Chinese Azaleas growing and blooming in our borders, and vying in beauty with the well-known Rhododendrons of North America."

"Although the plant is in a monstrous state, and is clearly a garden production, yet as it seems to belong to some wild form of the genus not before described, we have felt justified in treating it as a distinct species."

THE MYSORE HEXACENTRE (*Hexacentris Mysorensis*).—This charming stone climber from India is well worthy the attention of amateur or professional growers of new and rare plants. It was shown first in England, in May, 1852, before the London Horticultural Society, and was pronounced the most attractive among all the new and fine plants exhibited. This is saying a great deal. We copy the following cut and description from *Paxton's Flower Garden*:



MYSORE HEXACENTRE.

"Among all the fine plants exhibited in the garden of the Horticultural Society last May, none excited such universal interest as that now represented. It formed a small umbrella-like creeper trained over trellis in the manner represented in the annexed vignette, the whole circumference of which was loaded with pendulous racemes of most beautiful large yellow and crimson flowers. The plant was sent to Messrs. VERNON, of Exeter, from the Mysore country, which it inhabits, as its name indicates. No doubt it is the best hot-house climber that has been introduced for many years.

"We understand that the plant was sent home by FRANCIS MALTBY, Esq., of the H.E.I.C. Civil Service. Our drawing having been taken from an inferior specimen, by no means represents all the character and beauty of the species. One drawing, received from Mr. MALTBY since this figure was made, represents the bunches of flowers and buds from fifteen to eighteen inches long, and another with the upper or first flowers dropped, and a large cluster suspended at the end of a flower-stalk of about the same length. It is added that, before the plant is out of bloom, the pendulous flower-stalks are from two to two and a half feet long.

"Whatever may be thought of the so-called species, which Professor NEES VON ESENBECK has separated from the original *Hexacentris coccinea*, Dr. WALLICH's *Thunbergia coccinea*, nobody will question the entire novelty of the plant before us, whose small not leafy bracts, large corollas and shaggy not smooth anthers, indicate a totally different organization.

"The genus *Hexacentris*, which signifies six spurs, is named in allusion to two of its stamens, having one spur each proceeding from the base of the anthers, while the other two have each two spurs."

ACACIA MARGINATA. R. Brown. (*Alias* *A. trigona* Alph. De Candolle.) A handsome green-house shrub, with dark green leaves, and bright yellow blossoms appearing in April. Native of King George's Sound.

This is known in Gardens as *A. celastriifolia major*, under which name the plant from which our drawing was made was exhibited by Messrs. HENDERSON & Co., of Pine Apple Place. Its long narrow curved phyllodes (leaves), shorter spikes, and downy ovary, amply distinguish it from that species. To *A. myrtifolia* it approaches much more nearly, as Mr. BENTHAM has remarked; it seems indeed to be distinguishable only by its longer and more falcate leaves and more downy ovary. As to the *A. marginata* of gardens, we believe it is more frequently *A. celastriifolia* itself than anything else.



ACACIA MARGINATA.



Editor's Table.

THE FRUIT CROP.—WEATHER, &c.—The fruit crop in Western New York, after passing through several trying changes of temperature, promises well, and may now be considered out of danger. On the evening of the 18th of May we had a violent thunder shower, accompanied with some hail and a great deal of wind, that in many places blew down houses and uprooted large trees. It injured the peaches, pears, and plums considerably; apples were just in a sufficiently backward state to escape. What made it worse, were several cold, rainy days that followed. The peach trees looked worse than we ever saw them, and for a short time all hopes for a crop were abandoned. On the last days of May, however, it became warm, and trees recovered rapidly—the curled and bloated leaves dropped, new healthy leaves pushed out, and the fruit that remained on swelled rapidly. Nothing can afford a stronger proof that it is cold and variable weather that affects the peach leaf, than the fact that as soon as we have a warm and steady temperature, the sickly leaves fall, and the tree assumes a healthy hue.

From the first of June up to this time (17th), we have had a remarkably favorable time for vegetation, and the growth made among trees and plants is fully equal to that of our best seasons at this time. On the 14th, 15th, and 16th it was excessively warm, the thermometer ranging from 94° to 96° in the shade; the atmosphere at the time was dry, and vegetation for the moment seemed on the point of being suspended, but a timely shower came, succeeded by a more temperate warmth, and now growth is luxuriant.

Green peas grown in the open ground appeared in the Rochester markets on the 13th June for the first time this season, we believe, and in two or three days after that were abundant, cheap, and good. The *Early Kent*, as far as we know, beats the other early sorts nearly a week.

On the 12th *Bauman's May*, *Early Purple Guigne*, *Belle d'Orleans*, and *Early Richmond* cherries were ripe. The *Belle d'Orleans* is the earliest light colored cherry we have yet seen.

Our correspondent, A. G. HANFORD, Esq., of Waukesha, Wis., writes us that the *Early Purple* was ripe with him on the 13th, so that Waukesha and Rochester are about equal in regard to the ripening of fruits.

NEW YORK STATE AGRICULTURAL COLLEGE.—On the 15th of April last an act was passed by the Legislature of this State incorporating the "New York State Agricultural College." No appropriation has been made by the State for this college, but we suppose it will receive its apportionment of the literary fund, under the control of the Regents of the University. It is fortunate in this respect, being placed wholly beyond the control of politicians. The beautiful farm of JOHN DELAFIELD, near Geneva, has been purchased by the Trustees, and the college will be put in working order as soon as possible. Of the farm of Mr. DELAFIELD the *Geneva Courier* says:

"Perhaps there is not another position in this State where there are so many things combined to render it just the place for such a seminary. The soil is the very best, and this farm of three

hundred acres is under the very highest cultivation. It is accessible from every part of the country by railroad and steamboat, and its position within a mile of Seneca Lake, which it overlooks, renders that feature of it strikingly picturesque and beautiful. Mr. D.'s residence is half a mile from the public road, and the college buildings and grounds, although overlooked by Geneva, will be beautifully retired and away from observation. We know of no position, other things being equal, which can compare with the farm of Mr. DELAFIELD for such an institution."

The following are the officers:

President.—JOHN DELAFIELD, of Oaklands, Seneca county.

Chairman of the Board of Trustees.—Hon. JOHN A. KING, Jamaica, Queens county.

Secretary of the Board of Trustees.—JOEL W. BACON, of Waterloo, Seneca county.

Treasurer.—N. B. KIDDER, of Geneva, Ontario county.

NATIVE WINES.—The Cincinnati wines are working their way into the market. Mr. LONGWORTH has established an agency in Rochester. His object, principally, is to let incredulous people know how good their Ohio wines are, or, in other words, to show the difference between *pure* wine and *counterfeit*.

H. C. WHITE, the agent, is not a professional wine dealer, but merely combines it, in an amateur way, with his editorial and implement affairs for the public good.

Wine drinkers should have patriotism enough to give the preference to native production, and especially if purer, and therefore healthier and better than the imported article. But we must drop the subject here, lest we entrench upon the field occupied by brother WARDER with so much credit to himself and advantage to the public. He will pardon this very slight trespass in his vineyard.

In our article on the *Duchesse d'Orleans* pear we omitted a description of the tree, as follows: The trees are of moderately vigorous growth, upright and regular. Wood—olive colored, with light specks. Foliage—somewhat like *White Doyenné*. It is yet doubtful with us whether it will make a durable tree on the quince. We have some very healthy and productive specimens six years old that have borne three years.

THE friends of Mr. GERVASE WHEELER, the accomplished architect and author of "*Rural Homes*," will be glad to learn that he has returned from Europe and resumed the practice of his profession. His card will be found in our advertising pages.

MAY WEATHER IN OHIO.—The change of weather last week after our items were made up, was a remarkable one, if any thing can be remarkable with regard to climate. Thursday morning was cold enough for a March day. The vines suffered where not protected, though the change was quite enough to warn the wary. The potato tops were touched, and we observed the young shoots of our dwarf pears slightly nipped. Fruit, generally, did not suffer, so far as observed. The hail storm on Wednesday evening produced the change. On Thursday night was the climax. A gentleman informed us his thermometer stood at 32—ours at 38 under a porch.

As regards the peach prospect, we have made no inquiry, but our own orchard was pretty much stripped before the late frost. The severe changes in April caused the "curl of the leaf." Nearly every limb needs stripping, as the diseased leaves affect the health of the trees injuriously. Dr. HARRIS ascribes the cause to insects puncturing the leaf. What would he say to two or three hundred trees all "punctured" at the same time, and no insects visible? Mr. BARRY is right. The same thing has been noted by us before, and always traceable to sudden changes of weather. See the *Fruit Garden*, by P. BARRY, page 365.—*Springfield (Ohio) Gazette*, May 27.

ACKNOWLEDGMENTS.—FROM GEO. LESLIE, Toronto, C. W., seedling *Cinerarias*. *Beauty of Toronto*—white center, purple edge. *Blue Bonnet* (Kennedy)—dark blue, large, but a loose, open, imperfect flower; the color alone is good. *Lesliana*—white center and crimson on edge; good color, but the petals are narrow and shape very poor. *Canada West* (Kennedy)—white, with a light edging of lilac; delicate and pretty, but wanting character and distinctness. In the collection of unnamed seedlings examined last month, there were some half a dozen better than any of the present lot.

Seedling *Calceolaries*—all pretty, but none of them remarkable. No. 1 is large and colors good; but among hundreds of seedlings which we have seen in bloom this spring, we have found no new colors nor combinations. Deep or light yellow, or cream, with a light or heavy marbling of light red, dark red or maroon. The various combinations of these colors, however, are very interesting.

British Queen Strawberries—We are indebted to R. G. PARDEE, Esq., of Geneva, for specimens of this famous variety, grown by Dr. HULL, of Newburgh. They were of fair size, but not much more than half as large as we have seen them before, both in this country and in Europe. They must have been ripe at Newburgh nearly ten days or a fortnight sooner than they would be at Rochester. A note from Mr. PARDEE concerning Dr. HULL's culture will be found in another place.

I send inclosed two small squares of enameled glass suitable for horticultural purposes. It is manufactured near this city, and is considered an admirable substitute for all other kinds for green-houses and forcing beds. One surface is made opaque in its manufacture; it is roughened and similar in appearance to what is termed ground glass. Why import, while an article in all respects available is made in this country! The cost of this enameling on the glass is five cents per foot additional to the price of the glass, or five dollars per hundred feet. Glass that I sell at \$4.00, \$4.25, and \$4.50 per 100 feet, would be \$9.00, \$9.25, and \$9.50; the price of the double thick glass sent, is double for the glass; enameling the same. THOS. P. JAMES.—*Philadelphia*.

The glass referred to in Mr. JAMES' note is a beautiful article, and we have no doubt will answer horticultural purposes well. It seems to be just the thing, but five cents per foot for the enameling makes it costly, and the cost is a matter of importance, especially to professional cultivators who use large quantities of glass, and have to study economy. Some sort of obscured glass seems to be necessary under our bright scorching sun for nearly all glass structures. The English rough plate glass, one-eighth of an inch thick, weighing two pounds to the foot, costs in England from eight cents to ten cents per foot, for sizes varying from 8x10 to 10x14; this is about the price of the enameled glass, common thickness. The double thick enameled would be, we suppose, about one-eighth of an inch thick, and would cost twice as much as the rough plate; but then there is to be added freight, duty, and other charges.

STRAWBERRIES.—Our friend Mr. PARDEE, now of Geneva, has been on a tour of observation among the strawberries, and very kindly permits us to publish the following notes:

STRAWBERRY CULTIVATION.—A determination to examine as thoroughly as possible for myself this spring the best strawberry grounds within my convenience, induced me to visit the fine gardens of WM. R. PRINCE, Esq., of Flushing, and Dr. A. G. HULL, of Newburgh, on the 8th and 9th June inst., where the very large variety of well cultivated, excellent kinds afforded me much gratification. I do not know of any place in this country where we can find nobler specimens of rare trees, shrubs, and plants than on the truly splendid grounds of Mr. PRINCE. For many years he has been a most enthusiastic cultivator of the strawberry, together with the trial of hundreds

of his own seedlings. I noticed quite a number of promising seedlings, some of which exhibited a very handsome show of fruit, and several of his favorites were of fine flavor, size, color, and production, but they were pretty uniformly in such compact little masses—as most nurserymen's beds usually are—and some of them so shaded by trees and shrubbery, that an intelligent opinion could scarcely be inclined to in regard to them. I hope Mr. P., or some one, will give them a fairer test, with more room, light, and air, for two or three kinds certainly looked very well, considering the disadvantages under which they labored; for until this is done, I cannot see as it can be determined whether any of these seedlings are of equal or superior merit to other standard kinds we have already established. Some fruit will bear better in compact masses than others, and not so well as superior fruit under better and similar circumstance. I thought decidedly the best looking bed of strawberries on the grounds was *McAvoy's Superior*, with the largest fruit on it, and I saw them in two or three different exposures.

Dr. A. G. HULL has about thirty acres of land at Newburgh, adjoining on the west the residence of the late lamented DOWNING, on which Dr. HULL is exhibiting a profuse expenditure of money and taste. The situation is certainly one of the most commanding on the Hudson, and it is astonishing to see with what rapidity he is bringing it towards perfection. I saw many things there, as well as at Mr. PRINCE's, I would be glad to speak of, but my object is mainly to refer to the strawberry. Dr. HULL cultivates the strawberry largely and well. His rows, I should judge, were full three feet apart, and the plants were nearly one foot apart in the rows, well mulched with tan bark.

On almost the first bed I came to, I saw what I had so long desired to see—the *British Queen*, in all her glory. The earliest fruit was just ripening, and the flavor, on comparing with other fine kinds, was truly delicious. I carefully examined also its bearing qualities, and should think any one would pronounce them very satisfactory. The large bed bore quite uniformly and very well—that is to be specific. I noticed the strong plants usually had from six to eight stalks on each plant, with five to eight large berries on each; and I noticed the quarter part of the blossom-buds perfected fruit. So much has been said about the impossibility of raising a fair crop of this fine fruit in this country, that I was carefully guarded at all points in my examination, and have no hesitation in pronouncing it a fair crop. The ground was high, rather hard, dry, and gravelly, and I should judge had no superior cultivation, except an intelligent a thorough preparation of the bed in the first place, with a rather too thin mulching of tan bark afterwards. And here I must acknowledge that for ten years I have endeavored to obtain the *true British Queen* strawberry, and have a number of times had no doubt for a time I really had it; yet I must confess in all the exhibitions I have attended, and grounds visited, I have never before seen the *true British Queen* in bearing. (1.) I took some of the fruit to Geneva and submitted them to the test of an Englishman perfectly familiar with it, and who has the same growing in his garden on some plants brought over by himself, and he pronounces them genuine. The varieties ordinarily cultivated in this country for the *British Queen* have no relation to it. I do not think the *Queen* a good variety for an ordinary cultivator to do much with, but still worthy the attention of amateurs. The fruit more nearly resembles in appearance the *Alice Maud*, but shorter and different shape, with higher flavor, of course. I was also pleased to examine at this place almost all of MYATT's varieties in good cultivation, and although *Myatt's Eliza* was surprising Dr. HULL by its unexpected respectable appearance, yet I think he will soon discard all MYATT's but the *British Queen*. *Burr's New Pine* was sustaining itself nobly on these grounds, while *Black Prince*, with an occasional exception, exhibited the same insipid flavor so common in Western New York. As in Mr. PRINCE's grounds, so in Dr. HULL's, *McAvoy's Superior* bore off the palm, completely throwing HOVY's and other similar varieties in the shade as to size, flavor, and productiveness, while *Longworth's Prolific* followed closely in the wake. Dr. HULL had several large beds of each, with plenty of room, and afforded them a much fairer test than Mr. PRINCE. *Kitley*, *Goliath*, *Schiller*, in Dr. HULL's grounds, and a number of varieties at Mr. PRINCE's, had

not yet begun to ripen, and of course I could not judge of them. Hover's no where that I saw it did itself justice east.

By this visit to these fine strawberry plantations, I am confirmed in the opinion that no where within my observation is the soil and climate so favorable to the cultivation of the strawberry as in our vicinity; for no where have I ever seen so large fruit, or so great productiveness, as we are accustomed to see around Rochester.

R. G. P.

(1.) Some five or six years ago the *British Queen* might have been found in nearly all the nurseries; but when on trial it was found a shy bearer, and somewhat delicate, it was immediately dropped. Dr. HULL's success again revived some hopes, and created a temporary demand for the plant, that has induced the nurserymen to plant it again.

ASTONISHING SUCCESS.—The annals of horticulture never have, and probably never will again, witness a more wonderful triumph than the two last numbers of the *Horticulturist* have unfolded to the world, viz: an old strawberry raiser has actually produced, according to his account, within eight years, more than twenty varieties of strawberries worthy of being pronounced "very productive," besides possessing almost every other imaginable good quality. Of all the valuable varieties now in cultivation of this fine fruit, not one kind can be found so worthy of being on a family list as six of those wonderful seedlings of the writer, and for a market garden only two exceptions are made for other kinds, and of those two one of them has scarcely been long enough in cultivation east of Ohio to give it a fair trial, and the other will scarcely bear at all in many locations and soils with ordinary cultivation.

Most men consider themselves highly favored if they succeed during years with thousands of seedlings in getting one or two varieties which really prove worthy of general cultivation; but one man, it seems, has made himself an illustrious exception. I shall be most happy if, when others prove them, they shall be found so deserving. Until then, even a *Prince* has not the power to prevail over a

YOUNG DIGGER.

Permit me to say a few words with respect to LONGWORTH's popular strawberry. I am continually receiving communications, with leaves and flowers, of a spurious sort sold for this strawberry. This plant is yet scarce, and I am sorry that a pistillate variety, without merit should be palmed on the public for this favorite of mine.

D. McAVOY.

We are very sorry, too, Mr. McAVOY, we assure you. We have ourselves lost two years' culture of this variety through a little carelessness on the part of some one.

AFLECK'S ALMANAC.—It would afford me much pleasure to have a small place in your journal to notice a work published by THOMAS AFLECK, of Washington, Adam's county, Miss., in which I conceive he is attempting to teach southerners erroneous views on the subject of Southern Pomology. The work alluded to is "*Affleck's Southern Rural Almanac*," and from it I shall make a few quotations in regard to his views on the acclimation of fruit trees, notice them briefly, give my experience, and leave your readers, (which I hope are many in Mississippi,) to draw their own conclusions. The lively interest which I feel on the subject of Southern fruits is the only apology I have to offer for thus attempting to combat that which I know to be erroneous, so far as this section of the State is concerned.

As I have promised to occupy but little of your time, I give you the quotations first. Mr. AFLECK asks, "*Can an individual plant, the growth of a rigorously cold, or even a cool climate, be made to thrive—not merely to exist—in a climate warm as ours?*" Experience has most amply proven that it can not: and experience, too, acquired at so costly a price, and by so many individuals as to be beyond dispute. Where are the tens of thousands of fruit trees which have been brought to the South from Europe, and the North, and West, in years past? Not one in a hun-

dred are now living; and not one in a thousand ever bore a fruit! This is perfectly notorious. The *individual trees* are here meant. Where proper means are used, they may be carried through a season or two, so as to admit of propagation from them here, thus bringing about a gradual and complete acclimation." "It has been said, and with truth, that trees brought southward more than a degree or two, invariably prove unfruitful." "And here we would remark, by the term *acclimation* we mean a *rehabilitation*, rather, to a climate *natural* to the species, but to which the growth of wood and bark, made by the individual plant grown in a colder climate, is altogether unsuited, and which rarely, if ever, does become adapted to a more southern temperature. We have all seen northern-grown trees stand, year after year, making faint attempts at growing, bearing a few leaves, which are dropped long before the proper season, neither branches nor stems increasing in diameter, and not a fruit to be seen. Yet, young trees propagated from these upon thrifty, southern-grown stocks, grow, thrive, and bear fruit. Not always, perhaps, the trees first propagated, a second or third *generation* being often needed before a thorough acclimation is brought about. Young trees, cut to the ground, and compelled to make an entirely new growth, commonly thrive well."

This wholesale and sweeping denunciation against northern and foreign fruit trees, does not at all agree with my experience. I have planted fruit trees received as far north as Boston, from Messrs. Hovey & Co.; they not only lived, but grew—made fine, large, healthy trees, and produced abundantly the finest peaches I ever beheld—and I have fruited one hundred and ten varieties, many of them of southern growth, and grown in this immediate vicinity (Vicksburg), where they have the soil, location, climate, and varieties that will enable them to grow as fine peaches as the world has ever seen or tasted. I have seen notices in the New Orleans papers that peaches from there are the best sent to that city. Being familiar with the peaches grown there, I now challenge any orchardist there, or Mr. AFFLECK either, to show handsomer or better fruit than I can from "*these Northern individual trees*."

From Messrs. ELLWANGER & BARRY, Rochester, N. Y., I received a lot of pear trees on quince stocks a few years ago; they, too, have grown finely, and produced fruit—one variety weighing as much as one pound twelve ounces (*Duchess d'Angouleme*). If any fruit grower that has procured trees grown at the "southern nurseries" that are healthier or larger of their age, I will give him a silver cup, to be determined by any two individuals competent to judge. I have trees, also, from SAUL & Co., Newburgh, N. Y., MINOR's nurseries, Clarksville, Tenn., which have fruit on them at this time. These trees can be seen at any time twenty miles east of Vicksburg; also a large number from the Vicksburg nurseries, and of my own working; *fine trees*. Comparisons can be made from them by any one interested in these matters.

Mr. AFFLECK says, "a second or third *generation* being often needed before a thorough acclimation is brought about." Now I should like to know how many varieties of pear, apple, or peach he has produced from the seed worth eating? This is the only way a generation could be brought forth. In looking over his catalogue of fruits, I see nothing but the published varieties in cultivation—no *superior seedlings mentioned two or three removes from the original*. Let us examine this catalogue again, and see what he says about the ripening of fruits—his pears and apples ripening from one to three months later than with me, and peaches about six weeks. Location, one degree south of this, where fruits mature sooner. This looks to me as if he knew but little about our fruits, and all this gasconade about "*acclimated fruits*" well grown and adapted to this climate, is all for the purpose of selling his own trees, and injuring the sale of northern and western nurserymen. AFFLECK's prices are one to three hundred per cent. higher than northern nursery rates, and if he should be fortunate enough to convince those who are in want of trees of the great superiority of his, then his purpose will be accomplished. Let justice be done, however, to these trees brought from other States, from which I have gathered many a basket of luscious high colored fruit, and presented to my friends with the remark from them that they had no idea such fine fruit could be grown here. It might with the same propriety be argued

that a foreigner could not live in our climate, or that animals brought from a colder climate would sicken and die immediately.

Mr. AFFLECK came to this State a few years ago from Ohio, and he seems to have held his own pretty well. When I first met with him, he was selling stock from the above State, yet not a word did I hear him say about their being *unsuited* for us. "But a change came o'er the spirit of his dreams" since he got among us, and now nothing "brought south more than a degree or two" will begin to do. "Circumstances alter cases," however, and he is now in for the "*natives exclusively*," determined to make these bantlings of his own fruitful. Hoping they may prove fruitful to purchasers, and that we shall have a good account of them a few years hence, and not like many that I have known set out the first year hidden in grass, and set fire to "*clear off*" in the fall, "*growing less and less*" until they finally gave up the ghost, and the cry was raised that our country was "*not adapted to fruit*." S. W. MONTGOMERY.—*Hinds county, Miss.*

REPRODUCTION OF VARIETIES OF FRUIT.—While a resident of New England, we were often struck with the distinct and marked difference in the *Westfield Seek-no-further*. This apple was famous throughout the whole region of our observation, and was universally known and regarded as a first rate fruit; but, though it always possessed certain cardinal characteristics by which it was easily recognized as the *Seek-no-further*, it was often quite dissimilar in minor respects. In some instances, it was a late winter fruit; in others, it ripened in autumn. On some trees it was large; on others, medium sized; and on others, small. In some cases the color of the fruit was a fine red, extending over nearly the whole surface; in others, a lighter red was spread over one side only; and again, it was distinctly striped with red on a yellow ground. The form was generally conical, but sometimes round. The stem longer and more slender in specimens from some trees than from others. The flesh, though generally tender, was sometimes firm; and the trees occurred not unfrequently in old orchards, a large proportion, if not all, of which were seedling trees.

These are our impressions relative to this fruit, which, in some respects, may be erroneous; but believing that similar features pertain, in a greater or less degree, to other varieties, we have been induced to state them as our recollection best serves us. We were at a loss to account for so great differences in a well known fruit, except by supposing it to be more strongly disposed to be reproduced from its own seeds than most fruits.

On a visit to Torrington, Conn., a gentleman assured me he possessed a genuine *Winter Golden Sweeting*. This apple being one of our early and especial favorites, we procured scions, not believing at the time, however, we were obtaining a winter fruit with the characteristic qualities of the *Golden Sweeting*, and inserted them on a bearing tree previous to our removal to Iowa. Two years afterward we visited the tree in October, and were pleased to find two or three fruits bore an exact resemblance to the *Golden Sweeting*, except that they were green, hard, and apparently possessed of keeping qualities which, through circumstances, we were unable to test.

We learn from an intelligent nurseryman from Indiana, that several seedlings of the *Pryor's Red*, a popular western apple, have been produced, which bore so close a resemblance to the parent variety, both in habit of tree and quality of fruit, as not to be easily distinguished. We think the *Pryor's Red* more nearly like the *Westfield Seek-no-further* in its qualities, though evidently a different fruit, than any apple we have ever seen.

In cross-fertilizing, it seems the qualities of the new fruit may be predetermined by knowing those of the varieties from which it is produced, and this, whether the parent varieties have been extended by grafting or not; while it is stated that seedling varieties lose their power of reproducing themselves by their seeds, after being grafted on other stocks.

If it is true that seedling fruits are in a greater or less degree likely to be reproduced by their seeds, why not go back to the original tree of our best varieties, where they are known to exist—for instance, the *Newtown Pippin*, *Northern Spy*, and *Early Joe* apples, and the *Tyson*, *Dix*, *Beckel*, and other pears—and by enclosing the blossoms in the same manner as in hybridizing,

prevent cross-fertilization, with the hope of reproducing the identical, or closely similar varieties, superior in some respects, perhaps, to the original variety.

For example: If the *Seckel* pear could thus be produced by its seeds, the habit of the new *Seckel* tree might, perchance, be that of a robust and vigorous grower. It is feared, by some, that the tree of the famous *Northern Spy* apple will prove to be an indifferent bearer; may not this defect be obviated in the next generation of *Northern Spys*?

Should the foregoing ideas appear speculative, we hope some writer competent to the undertaking will inform us precisely how much latent power to reproduce themselves, individual varieties of fruits possess. JAS. WEED.—*Muscataine, Iowa.*

SHADE TREES—THE CLINTON GRAPE.—I heartily endorse most of Mr. BACON's remarks on shade trees in the March number. There may be too much of a good thing; and if you can have trees all handsome, variety is better than sameness. The Maple is really a very desirable tree; but have not old associations done much to give it unmerited supremacy? In New England you will see more Maples used as street shades than all others combined. Hardly any of its villages at all known for neatness and beauty, but has its avenue, or avenues, of century-old Maples; and the New England farmer, when he plants his street row, still selects the Maple as almost matter-of-course. If he does not select it, the one alternative is the Elm, which—I quite agree with Mr. BACON—is the better tree of the two. Happily there is no necessity of being confined to either one of them, where there is room for variety. So far as my observation goes, I may hazard the opinion that all our most beautiful forest trees at the north may be successfully grown on any soil capable of good farm crops, if first well subdued and *thoroughly drained*. I have seen equally fine Oaks and Elms on the lightest and on the richest of soils—on the poor plain, honored by the good taste and good cultivation of New-Haven's citizens, and on the rich clay of the (so-called) Ohio Black Swamp, or the alluvial of the Miami Valley.

In the forest the Hickory is, perhaps, oftenest found on rich, flat ground; yet some of the handsomest specimens I have ever seen of the species grow on light sand—and a good way down, too. The Red Flowering Maple, oftener known as the Soft Maple, is mostly found native to wet, or rather low situations. In a variety row of my own, two years' planted, on high, stiff, clay soil, it thrives as well as any tree in the row.

Speaking of the Oak, Mr. BACON says he has no reason to complain of the tardiness of its growth. Such is my experience. It grows fast enough, with good attention, to satisfy any one of reasonable expectations; and it is unquestionably the king among trees, as the Elm is the queen.

I am glad to see that your correspondent, "G. E.," calls attention to the *Clinton Grape*. For its hardiness and great productiveness, ten years of cultivation by my father and myself bear good witness. It is not quite equal to the *Catawba* as a table grape—having a pungency in the skin that imparts a rather unpleasant sharpness to a pulp which, alone, is both sweet and tender. For its hardiness and productiveness it is a valuable grape, where the *Catawba* and *Isabella* will not always ripen. Your correspondent says that in equal situations it ripens two or three weeks before the *Isabella*; my observation says from one to two weeks; even ten days grace often makes a very material difference in the value of a grape when frosts threaten to admonish the lagging season. I have little doubt that the *Clinton* will prove an excellent wine grape, though I have not seen it fairly tested. I have seen no greater nor more regular bearer; and have tried none that keeps better when packed for winter and spring use. WM. H. SCOTT.—*Adrian, Mich.*

Is there ever was a natural flower garden, it is the Sacramento Valley. Walk any place you please outside of the city, and wherever the plowshare of the husbandman has not been, there will you find a bed of beautiful wild flowers of every hue and description. Travelers by the wayside, at this season of the year, are indeed "treading in a paradise of beauty."—*Californian.*

CULTIVATION OF THE WILLOW.—Last fall I set about two thousand of the *Salix viminalis*, or basket willow, in a light loamy soil (it will stand a drouth well) from which I had taken sixty bushels of shelled corn per acre. I set them on a quarter of an acre, intending to set out the whole piece in future, making in all three acres. I was induced to try this kind of business, thinking it would be profitable. They said the willow could be grown on the soil before stated, and by paying as much attention to it as I would to corn, I could raise two tons per acre in three or four years, valued from \$100 to \$150 per ton.

This is new business to me, and I should like to get some information from persons with more experience in the culture of trees, &c., than I have had an opportunity to obtain. The willow business constituted quite an item in our imports for the last year. \$5,000,000 worth were used in the United States, of which New York city is said to have used \$2,000,000. If our climate is favorable, soil suitable, and if we can raise them for \$50 per ton, I cannot see what other inducements we wish to try and cultivate them.

Though I am saying *two* words for myself to *one* for somebody else, if these few remarks should suggest something to your mind that would be useful hints for all, then I have not written in vain. L. A. BEARDSLEY.—*South Edmeston.*

There are other points to be considered beside the mere growing of the willow. They must be peeled and prepared for market in the same way as those imported from Europe. We hope Mr. BEARDSLEY's inquiries will elicit some information on the subject, as it seems to attract considerable attention at this time.

PERHAPS what I may have to say is old to old gardeners, but to young ones, like myself, the result of a little experiment in the culture of cabbages, may be both new and useful.

I planted the ground occupied with such peas as *Stubb's Dwarf* and *Champion of England*, and after the peas had been removed, with cabbage plants of the variety of *Premium Flat Dutch*. August was considerably advanced before I got them in the ground, and, as I might have expected, when winter came but few of them were good for anything, most of them not being headed at all, or only very loosely. I dug a trench in the ground deep enough to receive the cabbages, and placed them in it heads down, and threw straw loosely over them and covered them up, just as I did well-headed cabbages for spring use. Now for the result:—Upon opening the trench the other day, (April,) I was surprised to find that these loose cabbages had become as hard as wood—indeed, perfect cabbages, though small. I have related the circumstance to several professional gardeners, who say that they knew before that cabbages would keep when buried, but did not before know they would *head* when buried. It seems to me a very useful fact. J. G. W.

CANADIAN FLOWER GATHERER.

BY MRS. TRAILL, AUTHOR OF "FOREST GLEANINGS," OAKLAND, RICE LAKE, C. W.

ADANTUM CAPILLAIRE—*Maiden Hair Fern*.—Early in the month of May may be observed by those who suffer their eyes to be occupied by what is going on among the lowly plants and herbs that spring up in their path, a most charming fern, known by the familiar names of Maiden hair and Fairy fern, from its elegant lightness. It is one of the most graceful of all that graceful tribe of plants; its botanical name is *Adantium* or Maiden hair; it grows in wild swampy and tangled thickets; it may be seen by the road side, but mostly does it love the rich, black, spongy mould on the banks of creeks, and there you must often have noticed it. At first the leaf comes up curiously curled, having the appearance of a brown hairy caterpillar. A few warm hours of sunshine or soft rain makes the leaf unroll, and the tender leaflets expand. In three or four days what a change has been effected! The thick covering of brown hair has disappeared—no trace of its infant dress remaining visible on the whole plant. The stem becomes smooth and black, and elastic, like fine whalebone, supporting its exquisite foliage on foot-stalks like light-

ness, diverging in a semi-circular form, and displaying fronds of the tenderest, most vivid green. Many other ferns retain the hairy covering, which forms a fringe of russet brown along the foot-stalks; and one in particular, that may often be seen in green-houses, is so clothed at its roots with this hair as to obtain from it the name of the hare foot fern.

This elegant species, the *capillaire*, preserves its color well in drying, and will bear the pressure of a moderately heated iron, if laid between many folds of soft paper. It may be then pasted down on a sheet of thick white paper by the application of a camel's hair brush dipped in common flour paste. Great care and neatness is required in this work not to apply *too much* moisture, and with a bit of fine rag to press down the leaf or leaves in the natural form of the plant; it must not be twisted or distorted into any stiff figure, as much of the merit of the work depends on preserving the exact appearance of the plant. Many kinds of flowers can be also preserved in the same way by carefully disposing the petals and leaflets between sheets of blotting paper, and submitting them to considerable pressure. A box filled with stones is a good press, but a screw linen press is best if it can be had. Specimens thus preserved, when dry enough, should be pasted down and the stalks secured by a slip of common adhesive plaster placed across in one or two places very neatly. The botanical and common name may be written at one corner, or a list with figures appended as reference kept with the specimens. The ferns are easier to preserve than flowers; therefore I recommend them to young beginners.

PODOPHYLLUM PELTATUM.—*Mandrake* or *May Apple*.—This was the first indigenous fruit that I saw in Canada; it attracted my attention on my first journey through the woods. I noticed, growing by the side of the road at the edge of the forest, a plant with two large palmate leaves, between the axils of which hung a yellow oblong fruit, about the size of a *Magnum Bonum* plum. The man who drove the horses told me it was good to eat, and alighted and plucked it for me, advising me to throw away the thick outer skin. The fruit was over ripe, and there was a rank flavor that I did not quite relish. I have since become better acquainted with the plant, and as there are many things about it deserving of notice, I will give a description of it for the information of those persons who have had less time to study it.

When the May Apple, (for in Canada that is its most common name,) first breaks the ground early in the month of May, the leaves are folded round the stem like a closed parasol, and are of a bronzed green, almost copper color, and expand, displaying two palmate leaves, i. e., spread like a hand; it is peltate—the peduncle, like a pillar, supporting the leaf from the center underneath, as in the Nasturtium and Water Lily, (*Nymphaea*). In the fruit-bearing plants the petioles form a fork, in the axil of which one large green bud (rarely, but sometimes, two), is inserted; the blossom is large roseaceous form, white, with a yellowish tint. At a little distance it gives out a pleasant fragrance, but when held too near is rank and overpowering. The flower is very handsome, belonging to the class and order of *Polyandria monogynia*. It is not easily preserved, as it is brittle and fleshy, and loses much of its beauty in its dried state. It is better to dry and press the flower separate from the leaves; it can be restored to its place (the axil of the leaves) and pasted down after the whole is prepared. This plan I have often pursued very advantageously.

The fruit of the May Apple, when the plant is found growing in moist partially shaded spots, will attain to the full size of a *Magnum Bonum* plum. The latter end of August is the usual time for its ripening. To have it in perfection, the fruit should be gathered before it turns quite yellow and laid in a sunny window. The outer rind, which is thick and fleshy and of a rank flavor, must be cast aside. The inner pulp, on which the seeds are imbedded, is of a delightful rich acid; but when intended for preserving, the fruit may be used quartered or entire, and thrown into boiling syrup, in which ginger or cloves have been boiled. Thus treated, after having remained in the jar some weeks, this is a most delicious preserve, scarcely inferior to some of West's Indian manufacture. Let the skillful and curious in such matters try it.

The seeds of the May Apple are used by the Indians as a cathartic; they are sometimes used

is curious to see a bed of them laid open, and to observe the way in which they interlace each other like an extensive net-work. They are white, about the thickness of a finger, spreading horizontally beneath the surface of the soil. From every articulation a bud sprouts up, forming the leaf stem. The single leaves produce no fruit—most probably they are the first year's growth; possibly it is from the second year's shoot that the fruit-bearing stem rises. I have often wondered if the May Apple has attracted the attention of the horticulturists. Could the fruit be improved by artificial culture?

Notices of Books, Pamphlets, &c.

RURAL ESSAYS. By A. J. DOWNING. Edited, with a Memoir of the Author, by GEORGE WILLIAM CURTIS; and a Letter to his Friends by FREDERIKA BREMER. New York: GEORGE G. PUTNAM & Co., 10 Park Place.

While Mr. DOWNING was yet alive and well, with a prospect of long years of usefulness and happiness before him, we thought that those charming rural essays of his that appeared from month to month in the *Horticulturist*, should be collected and put in a form more accessible to us all, and one especially that would place them more within the reach of thousands of general readers who eschew horticultural journals. This has at length been done; but alas! not as we hoped to see it done by *himself*, but by his bereaved friends, as a last sad duty. It is a beautiful volume of nearly six hundred pages, embellished with a portrait of the author, and many of the finest engravings that have appeared in the *Horticulturist*. A memoir by GEORGE WILLIAM CURTIS, and a letter to Mr. DOWNING's friends by FREDERIKA BREMER are prefixed.

Mr. CURTIS is well known as a tasteful and elegant writer, and the memoir which we have read carefully and with a painful interest, shows that he was a warm and intimate friend and ardent admirer of Mr. DOWNING, and that in many respects he appreciated correctly his talents, character, and influence. We must confess, however, that we are not pleased with him. We think we can see in several passages of the memoir an endeavor to exaggerate or color certain facts and circumstances in order to give additional interest to the production—a thing entirely superfluous—or perhaps to give more scope to his imagination and his pen. This is a very natural failure with such men as Mr. CURTIS, the particular charm of whose writings consist in highly colored, over-drawn pictures, but it is a great pity that in this instance he was not satisfied with a plain, unvarnished statement. The people who feel most interest in Mr. DOWNING's history are not mere novel readers, whose romantic appetites can only be satiated with the wonderful and supernatural; on the contrary, they are people whose minds dwell upon realities, lovers of the beautiful in nature and art, cultivators and improvers of the field and the garden, worshippers of Flora and Pomona, and Mr. DOWNING was their chosen leader, the man whose writings not only conveyed instruction and encouragement, but struck a chord of sympathy in their hearts that bound them to him as to a brother. How Mr. DOWNING's manliness of sentiment would have scorned such a puerile passage as the following:

"ANDREW was born many years after the other children. He was the child of his parents' age, and, for that reason, very dear. He began to talk before he could walk, when he was only nine months old, and the wise village gossips shook their heads in his mother's little cottage, and prophesied a bright career for the precocious child. At eleven months that career manifestly began, in the gossips' eyes, by his walking bravely about the room: a handsome, cheerful, intelligent child, but quiet and thoughtful, petted by the elder brothers and sister, standing sometimes in the door, as he grew older, and watching the shadows of the clouds chase each other over the

Fishkill mountains upon the opposite side of the river; soothed by the universal silence of the country, while the constant occupation of the father, and of the brother who worked with him in the nursery, made the boy serious, by necessarily leaving him much alone."

Does not this partake too much of the trifling style of a certain class of novel biographies? Further on he tells us:

"The mother, a thrifty housekeeper and a religious woman, occupied with her many cares—cooking, mending, scrubbing, and setting things to rights—probably looked forward with some apprehension to the future condition of her sensitive BENJAMIN, even if he lived. The dreamy, shy ways of the boy were not such as indicated the stern stuff that enables poor men's children to grapple with the world. Left to himself, his will began to grow imperious. The busy mother could not severely scold her ailing child; but a sharp rebuke had probably been pleasanter to him than the milder treatment that resulted from affectionate compassion, but showed no real sympathy. It is evident, from the tone in which he always spoke of his childhood, that his recollections of it were not altogether agreeable. It was undoubtedly clouded by a want of sympathy, which he could not understand at the time, but which appeared plainly enough when his genius came into play. It is the same kind of clouded childhood that so often occurs in literary biography, where there was great mutual affection and no ill feeling, but a lack of that instinctive apprehension of motives and aims, which makes each one perfectly tolerant of each other."

It would appear from the last sentence in this quotation, that Mr. CURTIS had in his mind a certain stereotyped style of "literary biography" to which the subject of his memoir must whether or no be adapted. The inference that one would naturally draw from the last quotation would be, that DOWNING's parents were very poor, and very ignorant as well, and that they showed him no sympathy. Now, as far as we know, such a conclusion would be quite erroneous. Mr. DOWNING's parents were, as we have been informed, during his childhood in easy, comfortable circumstances, plain, unpretending, but intelligent people, enjoying a respectable social position in the neighborhood. As a proof that they were not so poor as we would infer from Mr. CURTIS, Mr. DOWNING's father at his death bequeathed to his children, free from debt, the beautiful property on which Mr. DOWNING lived and died.* In another place we are told by Mr. CURTIS that—

"He, too, had been hoping to go to college; but family means forbade. His mother, anxious to see him early settled, urged him, as his elder brothers were both doing well in business—the one as a nurseryman, and the other, who had left the comb factory, practising ably and prosperously as a physician—to enter as a clerk in a dry goods store. That request explains the want of delight with which he remembered his childhood: because it shows that his good, kind mother, in the midst of her baking, and boiling, and darning the children's stockings, made no allowance—as how should she, not being able to perceive them—for the possibly very positive tastes of her boy. Besides, the first duty of each member of the poor household was, as she justly conceived, to get a living; and as ANDREW was a delicate child, and could not lift and carry much, nor brave the chances of an out-door occupation, it was better that he should be in the shelter of a store. He, however, a youth of sixteen years, fresh from the studies, and dreams, and hopes of the Montgomery Academy, found his first duty to be the gentle withstanding of his mother's wish; and quite willing to 'settle,' if he could do it in his own way, joined his brother in the management of the nursery. He had no doubt of his vocation. Since it was clear that he must directly do something, his fine taste and exquisite appreciation of natural beauty, his love of natural forms, and the processes and phenomena of natural life, immediately determined his choice."

*The whole family occupied a position in society not inferior to that of A. J. DOWNING, though in a different sphere of action. One brother was a successful physician, and died young; the other, CHARLES DOWNING, is well known as one of the most intelligent nurserymen and pomologists in the country, now living retired at Newburgh.

Now we were told by one who ought to know, that he never expressed or entertained a desire to go to college, and if he had, we are quite certain that the family means did not forbid. Elsewhere, too, he speaks of his never being heard of as a partner in the nursery. This we know to be a mistake, for he was recognized and heard of as having his full share, and more than his share of influence in the business affairs of the nursery firm, and we believe he was always in childhood and manhood regarded with more than ordinary respect and affection by his brothers and sisters.

The memoir refers to "a certain aristocratic *hauteur*" in Mr. DOWNING's manner, which was always evident in his personal intercourse. "In his dealings with workmen, with publishers, with men of affairs of all kinds, the same feeling which they called 'stiffness,' 'coldness,' 'pride,' 'haughtiness,' or 'reserve,' revealed itself." This is explained as follows:

"Its origin was, doubtless, two-fold. It sprang first from his exquisite mental organization, which instinctively shrunk from whatever was coarse or crude, and which made his artistic taste so true and fine. That easily extended itself to demand the finest results of men, as of trees, and fruits, and flowers; and then committed the natural error of often accepting the appearance of this result, where the fact was wanting. Hence he had a natural fondness for the highest circles of society—a fondness as deeply founded as his love of the best possible fruits. His social tendency was constantly toward those to whom great wealth had given opportunity of that ameliorating culture—of surrounding beautiful homes with beautiful grounds, and filling them with refined and beautiful persons, which is the happy fortune of a few. Hence, also, the fact that his introduction to Mr. MURRAY was a remembered event, because the mind of the boy instantly recognized that society to which, by affinity, he belonged; and hence, also, that admiration of the character and life of the English gentleman, which was life-long with him, and which made him, when he went to England, naturally and directly at home among them. From this, also, came his extreme fondness for music, although he had very little ear; and often when his wife read to him any peculiarly beautiful or touching passage from a book, he was quite unable to speak, so much was he mastered by his emotion. Besides this delicacy of organization, which makes aristocrats of all who have it, the sharp contrast between his childhood and his mature life doubtless nourished a kind of mental protest against the hard discomforts, want of sympathy, and misunderstandings of poverty."

Here again Mr. CURTIS seizes upon the imaginary poverty of Mr. DOWNING's childhood, want of sympathy, &c., to sustain a theory far from being philosophical. If it were true that Mr. DOWNING had been oppressed in his early years by poverty or unkind treatment, would that the more incline him to be proud and aristocratic? We see instances of this kind in the world sometimes we admit, where ignorant and selfish men become purse-proud and insolent, forgetting their humble origin; but DOWNING was not the man to do this. He would have been just what he was if he had inherited a kingdom, instead of the red cottage at Newburgh. His pride, reserve, or whatever else it might be called, and we admit that it was very generally observed and commented upon, was owing, as we always thought, to a severe self-discipline both of mind and manners to which Mr. DOWNING continually subjected himself. There was a certain self-restraint apparently upon him at all times and in all places that bade defiance to every thing. Miss BREMER in her letter refers to this matter. She says:

"I am not sure of being right in my observation, but it seemed to me that in the course of no long time, the mind of my friend had undergone a change in some views that to me seem of importance. When I knew him at first he seemed to me a little too exclusive, a little aristocratic, as I even told him, and used to taunt him with, half in earnest, half in play—and we had about that theme some skirmishings, just good to stir up a fresh breeze over the smooth waters of daily

life and intercourse. I thought that he still wanted a baptizing of a more Christian, republican spirit. Later I thought the baptizing had come, gentle and pure as heavenly dew.

"And before my leaving America I enjoyed to see the soul of my friend rise, expand, and become more and more enlarged and universal. It could not be otherwise, a soul so gifted must scatter its divine gifts as the sun its rays, and the flower its seeds, over the whole land, for the whole people, for one and for all. The good and gifted man would not else be a true republican."

As to the essays themselves we have nothing to say. The public verdict has long since been passed upon them. All we have to do is to recommend their perusal to every person interested in country life. When we lost Mr. DOWNING it was not the best of architects, or landscape gardeners, or pomologists we lost, for we have others that may fill his place in any or all of the departments; but as a rural architect and landscape gardener combined, he left behind him no equal. He had studied these two subjects, so closely interwoven with one another, until he had matured them. He had made the study of the *beautiful* the chief business of his life, until not a line or shadow of a building, a tree, or a landscape, could escape the scrutiny of his keen and delicate perception.

Some other even might have possessed as much knowledge and taste as Mr. DOWNING, and yet have scarcely ever been heard of; but he commanded attention by his dexterous and graceful pen. Subjects that in other writers' hands were dry and uninviting, he clothed in a garb so rich and fanciful, that people read them for amusement quite as much as for instruction. His descriptions of the beautiful—as for instance his "*beau idéal* of a fine ornamental tree," is no less irresistible than his sarcasm on "Cockneyism in the Country." This was the secret of his power in awakening taste and giving it the right direction, and this it was that enabled him to accomplish so much with so little effort and in so short a time.

It was said of him, we are told in the memoir, that "if his income had been a million a minute, he would have still been in debt." This was merely meant to convey the idea that he was not a man who managed his finance in a way that the world calls *prudently*, which we presume to be the truth. He desired money only as a means of promoting his comfort and gratifying his taste. Gold was to him merely to be used in the embellishment of life, not in making it miserable and mean. The cash-book or the ledger were less concerns to him than the book of nature. The money that your prudent, money-making men would have invested in bonds or stocks, he spent freely upon his dwelling and his garden, and in entertaining a refined society of congenial tastes. But he was an industrious, energetic, courageous man. He became embarrassed in his affairs as much more prudent men have, but "his composed manner was unruffled as ever." "His house was still the resort of the most brilliant society; still—as it always had been and was until the end—the seat of beautiful hospitality." He was of a sanguine temperament; he had full faith in his ability to earn enough to maintain his position, and he did so. He had faith in the growth of taste and liberality in regard to rural affairs among his countrymen, and felt that his taste and genius could not be unemployed or unpaid; and he was right. At the time of his death his services were called for in all directions, and his prospects were of the most flattering character. At the age of thirty-seven he had built up a new profession, and made himself an acknowledged master of it, and had written a library of the most elegant and instructive works on rural affairs. Will we admit, then, that Mr. DOWNING died *poor*? No hoary millionaire ever dropped into his grave and left such riches behind him. The riches that he left, the earnings of early manhood, are not such as "fast" relatives might spend in a few years, but such as will endure forever.

ANSWERS to Correspondents.

(R. B. W., Picton.) **COMPOST.**—Your compost, "one-third of each, swamp muck, barn-yard manure, and loam, with soap suds thrown on it from the weekly wash, and let lay for six months," is excellent. Some lime would improve it; and it would be well, unless your land be in good condition, to double the proportion of stable manure. Your mode of applying it is very good.

INFLUENCE OF THE MOON.—We know of no reason why trees should be planted in the new moon more than the old. We have circumstances enough to control us without adding the moon.

The best time to cut underwood in order to kill the roots is undoubtedly during the summer, when growth is active.

(B. L., Cobourg.) **HOW TO PROPAGATE THE RED CEDAR AND SPRUCE.**—The berries of the Red Cedar when gathered, must be buried in sand or sandy earth for a year, then sow in light earth. If sown the same season they are gathered, they lie a whole year in the ground before vegetating.

The Spruce seed grows the first season. Dry the cones until the seed comes out; sow early in the spring in a dry border of light soil, or in boxes; shade in the middle of the day, when the plants are coming through the ground, and until they begin to make a second growth, when they will be hard enough neither to burn or damp off easily.

At page 295 (June number) of the *Horticulturist*, a lady correspondent asks a cure for the American Blight on a beautiful White Pine, which the editor answers as beyond control on large trees. *Not so.* Use soap suds made strong, and wash the whole of the body and limbs affected. The writer of this several years since saved several "beautiful White Pines" with this simple wash thrown up and over the parts affected with a garden engine, two or three applications proving fully successful, no blight since appearing on either of the trees so washed. Make a suds of common soft soap, of about the consistency used in washing coarse clothes, and have faith. J. R. LATIMER.—*Wilmington, Del.*

"Have faith!" It was our want of faith that led us to doubt the success of a remedy, that in Mr. LATIMER's hands has proved successful.

Is there any *effectual* preventive of the peach borer? I have tried various methods which have been suggested for checking the depredations of this insect, but have found none that relieves the fruit grower from the necessity of going about at stated seasons, knife in hand, carefully inspecting the root of every tree, and destroying the larvæ that have secured a lodgment there. (1) In Vol. VI of the *Horticulturist*, page 493, mention is made of a discovery which promised to be effectual; has this ever been made public? (2)

What is the best season for pruning the currant, to increase the size as well as quality of the fruit? (3) A SUBSCRIBER.—*Dorchester, N. J.*

(1.) The only preventive we know of is the application of ashes or soot around the base of the tree in the spring. This is not wholly effectual, but is an aid. We lately saw in some paper an account of the application of a very thick whitewash, poured into a basin made around the base of the tree; this hardened, and kept off the insect.

(2.) All we ever heard of the discovery was in the notice you refer to.

(3.) Prune currants in the winter to have them large; keep the heads open, and the roots clear of suckers and superfluous shoots; give a good dressing of manure in the autumn, at least once every two years, and keep the ground clean and loose around the plants till after the fruit is ripe. This is something like the way to obtain large and fair fruit.

In pruning fruit trees, when it becomes necessary to remove large limbs, (from one to three inches in diameter,) how close should they be cut, in order to cause the wound to heal quickly and injure the tree as little as possible? WM. WELLER.—*Wyalusing, Pa.*

Cut so close that the surface of the wound will be on a level with the bark above and below it. Such branches should be partly cut through both above and below with a knife before using the saw.

Will you oblige me by letting me know the names of the hardiest varieties of Azalias and Rhododendrons best suited for open culture in this State—varieties that will stand our winters without being protected? A NEW YORK SUBSCRIBER.

The *Pontic* and *Belgic* Azaleas are all so hardy here as to dispense with protection. In fact, they appear to be as hardy as our native sorts, *nudiflora* and its varieties. The *Catawbiensis* varieties of Rhododendron are the hardiest we have yet tested. Indeed, we believe them hardy enough in any part of this State, if planted in a properly prepared border and a suitable location. The *Pontic* varieties stand very well with us, and it is possible that the new *Sikkim* varieties, or species, will be harder than any of them.

Do Dahlias vary materially in different soils, so that a variety first rate in one section is apt to be only second or third rate in another? (1)

I am advised that green-houses, unless in large towns, prove generally unprofitable. Is there not some way of fitting up for a moderate collection, without the expense of a separate regular green-house—as for instance the basement of a shop or office, well lighted on three sides—so that it would pay in connection with a country nursery? (2)

If the seedling root be better, as seems to be generally admitted, simply because it is seedling, why not the seedling stock also and for the same reason? (3.) F. K. PHOENIX.—*Delavan, Wis.*

(1.) They vary materially, both in soils and seasons, and their variations are obvious, both in form and colors.

(2.) You might keep a few half hardy plants in such a place. A good pit sunk in dry ground, with a few sashes so as to be lighted occasionally, would be better. It could be covered with leaves, so as to require no fire heat.

(3.) We are not sure that we understand the point of this question.

Horticultural Societies.

ANNUAL JUNE EXHIBITION OF THE HORTICULTURAL SOCIETY OF THE VALLEY OF THE GENESSE.—This exhibition came off on the 21st instant at Rochester, and was one of the best and most numerous attended the Society has ever held. During the day the hall was visited by highly respectable delegations of amateur horticulturists, both ladies and gentlemen, from Batavia, Cananadaigua, Geneva, Palmyra, &c., besides numerous strangers who happened to be making a temporary sojourn in our city. In the evening the citizens turned out in large numbers. All expressed themselves gratified—delighted with the display of fruits and flowers, but the oppressive heat or the weather injured the appearance of every thing very much, and lessened the comfort of visitors, although REYNOLDS' Corinthian Hall, in which the show was held, is one of the best ventilated buildings in the State. For two weeks previous to the exhibition, the weather was dry and warm; consequently the articles presented were neither so varied nor so excellent as they would have been under more favorable circumstances. In strawberries this was most striking. The varieties presented were below their usual size, and many who have heretofore made fine con-

tributions, did not present any; yet the show was good. Mr. PARDEE, of Geneva, offered 18 varieties, each separate and named, and a mixed dish consisting of 45 varieties. Among this collection were several new varieties that excited considerable interest; for instance, *McAvoy's Superior*, *Walker's Seedling*, *Moyamensing Pine*, *Crescent Seedling*, *Monroe Scarlet*, and *Genesee*. All these, we believe, came up to expectation, except the *Crescent*, which were really indifferent. A fine dish of each *Burr's New Pine* and *Hovey's Seedling* was shown by T. A. NEWTON for Mr. C. D. SOUTHWORTH, of Penfield.

In the Nurserymen's class, Messrs. H. HOOKER & Co. presented a collection of 8 or 10 varieties; good specimens. Messrs. FROST & Co. 2 varieties *Hovey's Seedling* and *Genesee*. ELLWANGER & BARRY 30 varieties, including most of the new sorts of note. *Burr's Ohio Mammoth* and *Genesee* looked most attractive.

We shall hereafter give complete lists, as far as we can obtain them; also reports of committees, and notes on the qualities of new varieties, which we have not space to give at present.

Few cherries were offered. Mr. POWIS, of Greece, a dish of *Early Purple Guigne*. Mr. LOVECRAFT, very superior specimens of *Bauman's May*. ELLWANGER & BARRY, a nice dish of *Belle d'Orleans*, that was much admired; also *Bauman's May*, *Early Purple*, *Early White Heart*, and *Coe's Transparent*.

In the flower department roses were the center of attraction. The intense heat deprived them of much of their freshness and brilliancy, but in regard to the extent of the collections and the rarity of the sorts, there has, perhaps, not been another show in America to surpass this. There was probably, in all, not less than 400 varieties shown, and among them the newest and best varieties that figure on the stands at Chiswick and Paris. In this matter the nurserymen show unbounded zeal. The principal contributors were Messrs. FROST & Co., ELLWANGER & BARRY, S. MOULSON, J. J. THOMAS, WM. KING, J. A. EASTMAN, and JOHN DONNELLAN.

Mr. SULTER, gardener to J. W. BISELL, Esq., made a very handsome display of well-grown pot plants. Two large scarlet Pelargoniums, in elegant rustic boxes, were much admired, as were also his Verbenas, trained appropriately to a flat horizontal wire frame.

Pot plants were shown liberally by Messrs. FROST & Co., ELLWANGER & BARRY, C. J. RYAN & Co., and WM. KING; but Mr. SULTER's alone exhibited care in training. Our plant growers do not find sufficient encouragement to give much attention to the growth and training of fair specimens, but we think they must try their hand at it or quit showing pot plants. Several pretty floral ornaments were presented: a pyramid of miscellaneous flowers by Mr. McNAB, gardener to Hon. JOHN GREIG, of Canandaigua; a bed (literally) of roses by Messrs. FROST & Co.; various tasteful baskets of bouquets by Miss HOOKER, Miss SARAH K. WARNER, Miss K. MOULSON, Miss ADAMS, Miss MARGARET MCGARRY, Mrs. R. DONNELLAN, &c.

The display of vegetables was small. G. W. HART, of Rochester, exhibited a dish of early June potatoes; very fine.

PENNSYLVANIA HORTICULTURAL SOCIETY.—At a stated meeting of this Society, held at the Chinese Saloon, Philadelphia, on the 18th March, the following communication was read:

"To the Pennsylvania Horticultural Society:—In accordance with a suggestion of the Society, expressed in one of its regulations, 'that notices of peculiarities in culture, management, &c., of the objects exhibited, are desirable,' I will make a few remarks on the sexual characters of the plants of *Hovey's Seedling* Strawberries I have exhibited this evening.

"This variety is usually classed as a pistillate, and considered worthless when not planted in the neighborhood of a staminate kind. I find by repeated observations made while forcing them, that they become staminate by being forced slowly in a moderate temperature; receive at the same time, an abundance of light and a regular supply of moisture—conditions well known as essential to a healthy luxuriance of the strawberry. On the other hand, I find that over-feeding tends to check that luxuriance, has a tendency to produce the pistillate form. In the specimens

before you, one, very weak from over-watering and deficient drainage, is a pistillate; another, a weak plant, and forced rapidly, has the anthers very nearly abortive; while the other plants, which have been in the forcing house since the middle of January, and in every way favorable to their healthy development, are as perfect as possible.

"Last season a number of plants started in a temperature of 65°, and ripened in one of 75° to 80°, produced all pistillates; twelve runners from these plants were selected, potted in small pots, and ultimately treated as other plants for forcing; seven of the strongest of these produced staminate flowers, and the other five, pistillates, like their parent plants. Another set, of one hundred pots, last season forced very rapidly, produced plants *all* pistillates; a similar set, forced early this season, produced all but the weakest plants perfect.

"It has been doubted whether the *Alice Maud*, in many collections, is correctly so; and it has been suggested that the growers should observe whether their plants are pistillates or staminate, in order to decide.

"I have submitted the above observations to you hoping they may have a practical bearing on that question, by showing the distinction between pistillates and staminate to be worthless—cultivation producing either one or the other.

THOMAS MEEHAN."

AD INTERIM REPORT, APRIL 19.—The Fruit Committee respectfully present the following ad interim Report: Since the Stated Meeting of the Society in March, the following Fruits have been submitted to the examination of the Committee:

From Dr. J. MARSHALL PAUL, of Belvidere, N. J.—Specimens of six varieties of Apples:

1. Name not known—Large; roundish oblate; red in stripes; of "good" quality.
2. Of medium size; roundish, inclining to conical; red in stripes on a yellow ground; flavor not particularly fine.
3. A New Jersey Seedling—Small; oblong, angular; red in stripes on a yellow ground; pleasant flavor; "good" quality.
4. Of medium size; roundish oblong; mottled and striped with red on a greenish yellow ground; has some resemblance to *Herefordshire Pearmain*, though inferior to it in flavor.
5. *Pricitly*—Of fine size, but partially decayed.
6. Beautiful specimens of the *Monmouth Pippin*—A native of Monmouth county, New Jersey. Although one of our best winter apples, it is not described in Downing's Fruit and Fruit Trees of America, nor in Thomas' Fruit Culturist. A concise commendatory notice of it, however, is contained in Kenrick's New American Orchardist, and in Barry's Fruit Garden. As it does not appear to be extensively cultivated or generally known, although its productiveness, size, and quality, render it worthy of a place in every collection, we give the following description: Size rather large; roundish, inclining to conical; greenish yellow, with numerous russet dots, sometimes a few crimson spots, and uniformly a red cheek; stem of medium length, rather slender; cavity deep, open, slightly russeted; calyx large; basin deep, sometimes plaited; seed light grayish brown, rather large; flesh yellowish white, fine texture; flavor very pleasant; quality "very good," if not "best."

From H. R. NOLL, of Lewisburg, Union county, Pa.—Specimens of two varieties of apples:

1. The *Adams*, a Pennsylvania Seedling which originated with JAMES ADAMS, of White Deer township, Union county, and noticed under the name of Noll's No. 1, in the *ad interim* Report for November last. Large; roundish oblate; faintly mottled and striped with red on a greenish-yellow ground; stem half an inch long and one-ninth to one-sixth of an inch thick; cavity broad, acute; calyx rather large, segments closed; basin wide, moderately deep, plaited; flesh greenish-white, of fine texture, rather juicy; flavor pleasant; quality "very good." The specimens examined on the eleventh of November were only regarded as "good," being somewhat dry and mealy.
2. The *Major*, a native of Pennsylvania. This apple originated with Major SAMUEL McMAHAN, of Chillisnope, Northumberland county. Size large; roundish; red sometimes blended with

yellow on the shaded side. Stem variable in length, of medium thickness; cavity rather wide, moderately deep; basin uneven, shallow; flesh yellowish, crisp; flavor pleasant, agreeable saccharine, and resembles, in some measure, that of the *Carthouse*, to which, however, it is superior; quality "very good."

From CHARLES KESSELER, of Reading.—Specimens of five varieties of apples:

1. The *Hepler*, a seedling from the garden of Mr. HEPLER, of Reading. Size under medium; oblate, inclining to conical; handsome, waxen yellow; stem rather long and slender; cavity wide, deep, acuminate, and considerably russeted; basin contracted, moderately deep, irregular, furrowed; flesh rather dry, but of pleasant flavor; quality "good."

2. The *Zieber*, a seedling from the premises of Mr. SAMUEL ZIEBER, of Reading. Size below medium; roundish; waxen yellow, with a striped red cheek, and a cicatrix on one side, extended from the base half way to the calyx; stem broken off; cavity slightly russeted, moderately deep and very narrow, with a small protuberance projecting into it; calyx small; basin narrow, rather deep; flesh somewhat dry, but pleasantly flavored; quality "good."

3. The *Neversink*, a seedling found last autumn, growing among the brush on the side of the Neversink mountain, in Berks county, Pa. Though not five feet high when discovered, its branches contained two bushels of apples of most attractive appearance. Fruit large; roundish; exterior of an exceedingly beautiful waxen orange yellow color, with a few russet dots, and a delicately striped and richly mottled carmine cheek; stem very short and rather stout; cavity narrow, acuminate shallow; calyx large; basin deep, rather wide, furrowed; seed greyish-yellow, acute-ovate; flesh yellowish, somewhat tough, owing, probably, to the fruit being much shrivelled; flavor approaching that of the Pine Apple; quality "very good."

4. The *Marks*, a seedling from the premises of Mr. MARKS, of Berks county, Pa. Size medium; roundish, tapering slightly to the crown, and somewhat angular; yellowish white, with a few russet dots, and nearly covered with a faint orange blush; stem half an inch long, a twelfth of an inch thick; cavity narrow, deep, acuminate; calyx small, closed; basin narrow, rather deep, slightly russeted; seed yellowish grey; flesh whitish, tender, fine texture; flavor delicately perfumed; quality "very good" if not "best."

5. The *Pfeiffer*, a seedling of Spring township, Berks county, Pa. Size below medium; roundish; sparsely streaked with red on a yellowish-green ground on the shaded parts, the streaks being more numerous, and on a fawn colored ground, on the side exposed to the sun; stem broken off in all the specimens, slender, inserted in a narrow, superficial cavity; calyx rather large; basin wide, moderately deep, plaited; specimens evidently unripe. The *Pfeiffer* is represented as being a very late keeping variety—the period of maturity extending to July.

From DAVID MILLER, Jr., of Carlisle.—The *York Imperial* or *Johnson's Fine Winter*. This apple is believed to be a native of York county, Pa. Size rather below medium; truncated-oval, angular; the unexposed side is mottled and striped, so as to present a greyish-red aspect on a greenish-yellow ground, and on the sunny side the color is a dull crimson; stem short, and moderately stout; cavity wide and rather deep; calyx small, closed, and set in a deep, wide, plaited basin; flesh greenish-white, tender, crisp, juicy; flavor pleasant and agreeably saccharine; quality at least "good," and to many tastes "very good."

From P. R. FREAS, of Germantown.—The *Jenkins*, a native apple of Montgomery county, Pa., which originated with JOHN M. JENKINS, of Hatfield township, near Montgomery Square. Fruit small; roundish-ovate; red, interspersed with numerous large white dots, on a yellowish ground; stem more than a half an inch long, slender; cavity deep, rather wide, sometimes russeted; calyx closed; basin deep, open, furrowed; core above medium; seed greyish-brown, acute-ovate; flesh white, tender, fine texture, juicy; flavor agreeably saccharine, exceedingly pleasant and aromatic; quality "very good," if not "best." The *Jenkins* is one of those delicious little apples peculiarly fitted for the table at evening entertainments; and, in conjunction with the *Evening Party*, will probably sunniant the *Pomme d'Avi*, on those festive occasions.

AD INTERIM REPORT, MAY 17.—The Fruit Committee respectfully submit, as usual, an ad interim Report on the specimens of Fruits submitted to their examination since the last meeting of the Society:

From CHARLES KESSLER, Esq., of Reading, Pa.:—The *Pfeiffer* apple—noticed and described in the Report for April, but not then sufficiently mature for testing, has since been examined, and is regarded as of "good" quality.

From Mr. JOHN GORGAS, of Delaware:—The *Freeze and Thaw* apple—grown on the farm of his father, in Roxbury Township, Philadelphia County, Pennsylvania. Size medium; conical; profusely striped and mottled with bright red on a yellow ground, with a number of light dots, and frequently one or more white splashes near the base; stem three-fourths of an inch long, slender, inserted in a wide, deep, acuminate cavity, partially russetted; calyx small, closed, set in a moderately wide, superficial, wrinkled basin; flesh of fine texture, but deficient in flavor, and on that account can scarcely be considered of "good" quality, if the specimens were cut at the proper time. Mr. GORGAS informs us that it may be left on the tree till it repeatedly freezes and thaws, without sustaining injury: hence the name.

From CHARLES KESSLER, Esq., of Reading:—A red apple—below medium size, which originated on the premises of Mr. HAINS, of Pricetown, Berks Co., Pa. Form roundish-oblate; skin thin, striped and marbled with bright red, and marked with numerous whitish dots near the crown; stem long, rather slender, inserted in an open, deep cavity; calyx large, set in a wide, rather deep, slightly plaited basin; the bright red stripes remain imprinted on the fruit after the delicate skin has been removed; the coloring matter penetrating and partially staining the otherwise whitish flesh, which is exceedingly tender and of fine texture; flavor agreeable; quality "very good."

From CHARLES KESSLER, Esq., of Reading:—The *Speckled Oley*—from Oley Township, Berks Co., Pa. This apple is said to be beautiful when in perfection, and usually one-third larger than the specimens sent to us. Size two and a half inches by two and five-eighths; roundish; striped and mottled with red on a greenish-yellow ground, and thickly covered with large white dots, most of which contain a russet speck in the centre; stem three-eighths of an inch long, by one-tenth thick, inserted in a very narrow, acute cavity, sometimes russetted; calyx small, set in a shallow, furrowed basin; seed long and of a light yellowish-brown color; flesh rather dry and mealy, but with a pleasant flavor; being over-ripe, an accurate judgment could not be formed of its quality.

From CHARLES KESSLER, Esq., of Reading.—A large greenish-yellow apple, with a faint brown cheek; roundish, inclining to conical, and somewhat angular; stem short, rather stout, and fleshy at its junction with the branch; cavity acute, narrow, russetted in rays; calyx small; basin moderately deep, not wide, furrowed; flesh tender, juicy; as the specimens were over-ripe the quality could not be ascertained.

From CHARLES KESSLER, Esq., Reading.—*Newtown Pippin*, from Berks County; large; roundish oblong; greenish yellow, with faint broad stripes of red on the side exposed to the sun. Not true to name, and not equal in quality to the genuine *Newtown Pippin*.

From Mr. SLINGLUFF.—Beautiful specimens of pears, from a tree purchased for the *Catillac*, but which proves to be *Uvedale's St. Germain*. The latter is distinguished from the former in being pyriform, while the *Catillac* is broadly turbinate. Both are valuable only for culinary purposes, and one of them (*Uvedale's St. Germain*) is familiar to us under the name of *Pound Pear*.

From JONATHAN C. BALDWIN, of Downingtown.—Pears labelled *St. Germain*; which we regard as not true to name. They were not in good condition when received, and we were consequently unable to test their quality. Mr. BALDWIN, however, who is a distinguished pomologist, has expressed so favorable an opinion of the variety, that we have drawn up the following description of it from the specimens he sent us: Large; obovate pyriform; greenish-yellow, with a brownish-red cheek; stem an inch long by one-sixth thick, inserted without depression; calyx set in a deep,

narrow, sometimes wide basin; seed very large; flesh yellowish-white, juicy; specimens not in a condition for us to determine the flavor and quality.

From Dr. BERTOLET, of Oley Township, Berks Co., Pa., through CHARLES KESSLER, Esq., of Reading.—The *Boas* apple, which was introduced into Oley about fifty years ago, by Rev. Mr. BOAS, of Reading, from Exeter Township, where it is known as the *Keller*: Medium size; roundish-oblato; deep crimson in stripes of different hues, with one or more whitish-yellow blotches near the base, sometimes only faintly striped with red on a greenish-yellow ground; stem very short and thick, inserted in a moderately deep, not very wide cavity; calyx set in a plaited basin variable in size and form, sometimes superficial and wide, sometimes rather deep and narrow; core small; seed very small, plump, acuminate, greyish brown; flesh yellowish-white, crisp; flavor pleasant; quality "very good." Said to be a long keeper.

ANNUAL MEETING OF THE BANGOR (MAINE) HORTICULTURAL SOCIETY.—At the annual meeting of the Bangor Horticultural Society held at the office of A. W. PAINE, Esq., on Saturday May 28, 1853, at 8 o'clock, P. M., agreeable to public notice, for the choice of officers, &c., the meeting was called to order by HENRY LITTLE, Esq., the President, whereupon the following officers were chosen for the ensuing year, viz.:

President.—Col. HENRY LITTLE.

Vice President.—ALBERT EMERSON, Esq.

Secretary.—JOHN S. AYER, Esq.

Corresponding Secretary.—ALBERT W. PAINE, Esq.

Treasurer.—JOHN S. AYER.

COMMITTEES FOR 1853.—*Executive*.—John S. Ayer, B. F. Nourse, John B. Godfrey.

On Fruits.—John S. Sayward, B. F. Nourse, Walter Goodale, Jefferson Stubbs, John W. Chapman.

On Ornamental Trees.—John E. Godfrey, Wm. Mann, I. D. Bartlett.

On Vegetables.—James Wells, Thomas Beacroft, Albert Emerson, Wm. Mann, J. W. Carr.

On Flowers.—Albert Noyes, Albert Emerson, Walter Brown.

Voted, That a premium of ten dollars be offered to the person who shall originate a Plum or Pear in the county of Penobscot, which in the opinion of the fruit committee at the time shall be worthy of such premium.

Voted, That this Society appropriate the annual sum of ten dollars to promote the cause of exchanges in scions, seeds, and plants, to be conducted by a committee of the chairmen of the several committees on fruit, vegetables, flowers, and ornamental trees.

Voted, That one hundred dollars be appropriated for premiums, to be awarded by a committee consisting of the chairmen of the committees on fruit, flowers, and vegetables.

JOHN S. AYRE, Secretary.

CAYUGA COUNTY (N. Y.) HORTICULTURAL SOCIETY.—The following is a list of the officers for 1853:

President.—HARRISON T. DICKINSON, Auburn.

Vice Presidents.—PHILIP R. FRESOFF, GEORGE E. BARBER, OLIVER W. WHEELER, Auburn; JOHN MORSE, Aurelius.

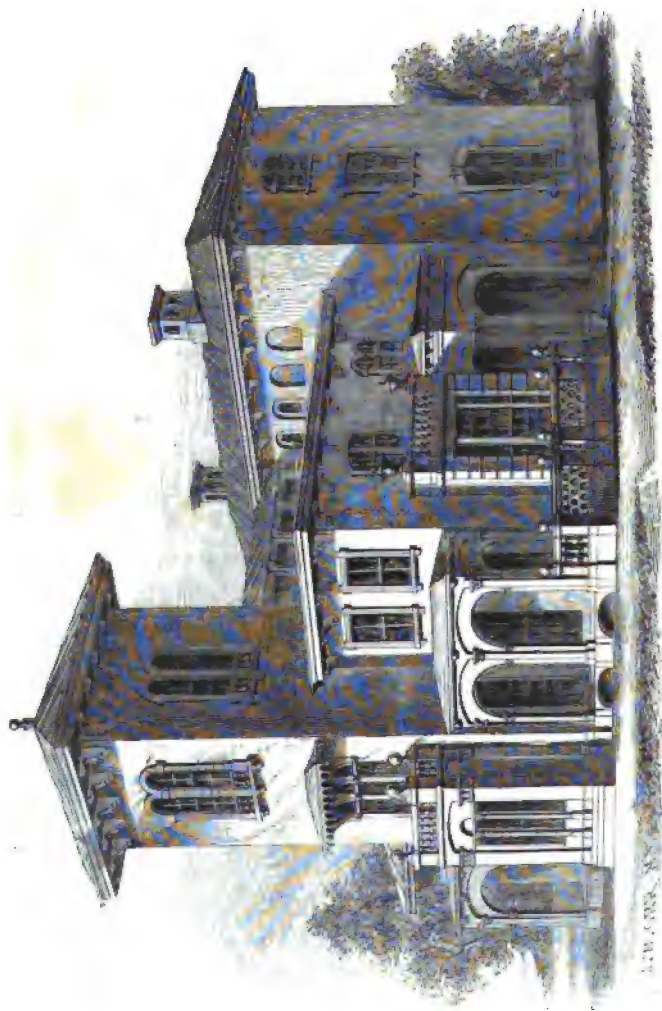
Corresponding Secretary.—HORACE T. COOK, Auburn.

Recording Secretary.—S. SEABURY GRAVES, Auburn.

Treasurer.—JOHN S. CLARY, Auburn.

Managers.—William Osborn, L. Q. Sherwood, H. H. Bostwick, A. V. Pulsifer, William Cutting, Auburn; S. H. Higley, Mentz; John R. Page, Sennett; W. D. Osborn, Port Solomon Giles, Weedsport.





VIEW OF A SUBURBAN VILLA.



Importance of Shelter.



SHELTER is a subject which comes directly home to every man who lives in the open country, and hopes to have a comfortable residence, with fields, orchards, and gardens, that may be cultivated with pleasure and profit. We fear that very many overlook this matter, in selecting and preparing their country residences. Elevated situations are generally preferred, and it is right they should be; such considerations as purity of air, facility for drainage, and a commanding prospect, have all too much to do with the pleasure and advantages of country life to be valued lightly; but whatever else we look for, and provide for, we should never forget to seek protection against prevailing winds, both for the dwelling and all that portion of the grounds to be devoted to the higher branches of culture. It matters not what latitude we are in, the necessity for protection exists. It may be much more necessary in one locality than in another, but nowhere that we know can it be dispensed with safely.

No man is so liable to err on this point, as he who has not been accustomed to country life—who has had no actual experience with the vicissitudes of climate and the destructive effects of high winds. He goes into the country in the midst of fine summer weather, when every spot is beautiful. An elevated site is sought for—one that commands a fine view, and is far above the influence of marshy vapors; such an one is found, and the dwelling is erected. Perhaps there is not a tree within half a mile of it; but that defect can soon be remedied by planting. Before the buildings are finished, however, the exposure begins to be felt—the winds blow fiercely, and the very house rocks on its foundation. But he perseveres—his house is completed and occupied. Winter comes, and with it biting blasts that penetrate every nook and corner. One room after another is deserted, and shelter is sought in whatever corner is least exposed. The dreary winter passes, and spring comes. A look over his grounds shows him nearly all his trees planted the autumn before are dead, frozen, and dried up. Well, it was a mistake to plant in the fall—he must plant in the spring; and so the dead trees are replaced with living ones; but they, too, find difficulties to contend with from exposure, and half of them perish before midsummer. So it goes for a year or two longer, when very likely he becomes sick of such rural delights, and returns to town.

This is not a mere fancy sketch. We have seen such cases in our own neighborhood, and such may be found in all parts of the country. A gentleman of our acquaintance, some years ago fell in love with a country residence a mile or two out of the town in which he lived. It was the most elevated and commanding situation in all the country about, and in fine summer weather, as he took his afternoon drive, his imagination revelled in the earthly paradise he could make of it, were it his. Finally, he purchased it, and fitted it up for his residence; but he very soon found out that he had

left some things out of account, and that many of the pleasures he had anticipated were more easily imagined than realized. It was a beautiful hill, to be sure, embracing in its view a large and populous city, several miles of a beautiful river, cascades, a distant lake, and some fifty miles or more of the most fertile and highly cultivated vallies in America. But the house stood upon its peak, and the winds from every point of the compass beat against it, as the waves do upon a solitary rock in the ocean; no shelter was there on any side. It was, therefore, not long before the novelty of the scene wore off, and the charm was broken. After battling the storm for a year or two, the gentleman sold out, and returned to town thoroughly cured of the passion for a suburban residence.

Now, all this place wanted was shelter, which, under some men's management, would have soon sprung up; but this was not thought of. If one of the first steps had been to plant thick belts of rapid growing trees around the exposed sides, the place would, in a few years, have become habitable; and instead of being, as it now is, dreaded by all, it would have been one of the most delightful places in the country.

But our purpose at present is particularly to call attention to the necessity of providing shelter to gardens, orchards, and grounds of every description, when valuable crops are to be grown. We believe that every experienced and observing cultivator will agree with us in saying that this is a matter of the first importance. Our own conviction is, that, however it may have been heretofore, it will be just as necessary in future to provide shelter as it will be to have a good soil and give it proper cultivation. Every season's experience, and the last most of all, strengthens this conviction more and more. The time was when our hill tops were crowned with forests that stood like bulwarks to break the fury of the storm and protect our fields and gardens from its destroying influence; but these bulwarks are, in a great measure, demolished. The necessities of some, and the short-sightedness of others, have "cleared" the hills, and now the winds sweep over them with unresisted violence. People just begin to realize what they have done, and regret it when too late. "Our climate is wonderfully changed," they say; "formerly we had no such cold, blighting winds as we now have—no such sudden and violent changes of weather; our climate is much less comfortable, and cultivation, of many things, much more difficult than it used to be." The farmer complains that his winter crops are more uncertain than formerly. When the snow falls, instead of affording protection to the surface of the ground, as it does in sheltered places, it is drifted before the wind, and piled up in heaps that melt only before an April sun. We see not only the snow blown off exposed fields, but the dried earth is actually drifted like the sands of an Arabian desert—the very plants growing in it scattered to the winds. See the destructive influence of the cold winds of winter and early spring upon the tender trees of our orchards, gardens, and nurseries! Cultivators in the prairie regions of Illinois, Wisconsin, Iowa, &c., tell us that they have nothing to dread so much as the cold winds of the winter months; and if they could only protect themselves against these, their country would be a comparative paradise.

In Western New York these cold winter winds are severely felt, too, and are really

much more injurious to vegetation than the most intense cold which we ever experience. A great many tender trees and shrubs stood the severe winter of 1851-2 in sheltered places without the least injury, while our mildest winters, such as '52-3, would have ruined them in an exposed place. We have beds of China Roses, and specimens of tender Yews and Junipers, that resist our coldest winters without covering, simply because they are surrounded with a thick plantation of evergreens. A single instance of this kind is as good as a thousand in showing the advantages of shelter, and every observing man may find such on his own premises. Those who have the management of glass structures know how shelter from the wind lessens the difficulty and expense of heating, and the risk of danger from sudden changes of weather. Every year we see orchards in sheltered situations bearing full crops, while those much exposed fail entirely. Throughout the whole range of cultivation we witness the same results.

But it is not merely against the winds of winter we need protection; we need it even more in spring, when the young leaves are unfolding and the blossoms expanding. This is the season of the year when our fruit crops and tender trees suffer most from exposure. Peach buds can resist a cold in winter several degrees below zero without injury; but a cold, dry wind, which lately we scarcely ever fail to have, at the moment when the buds are opening, arrests the course of vegetation, curls up the leaves, dranges all the functions, causing the fruit to drop, and gives the trees a shock from which they can scarcely recover. In such a time we see the advantages of shelter. Cold and violent winds, lasting two or three days in succession, are frequent in the season of the blossoming of the Cherry, Pear, and Apple, and we see the blossoms broken off and blown about in showers before the fructifying process has been completed. Last spring this was the case here, and in many parts of our grounds three-fourths of the crop was destroyed; in all the outside rows and exposed points this is particularly observable. In ornamental gardens there can be no complete success or satisfaction without ample shelter. We have seen charming beds of Hyacinths and Tulips ruined in a single hour where the wind had free access; and it happens that the finest flowers require protection most.

In midsummer we need protection as much as at any time. High winds bruise and break the soft and succulent leaves and shoots, and bend and blow over trees. We have seen, in an exposed nursery, hundreds of fine young trees broken down and destroyed in a few minutes. Then in autumn, when the fruit is attaining maturity, how often do we see trees broken down and three-fourths of the crop scattered on the ground, a heap of worthless windfalls.

Shelter, therefore, is one thing indispensable at all seasons of the year—there is no safety without it. The cultivator, whose gardens and orchard stand exposed to the pelting of every wind that blows, must certainly be ill at ease; he cannot count upon the safety of his crops a moment. Under the most favorable circumstances there are great hazards; but his are doubly—trebly great. Like a cowardly landsman at sea, he watches every gathering cloud with alarm, lest it may bring forth a hurricane that will destroy his hopes.

But we shall be told that it is impossible that every one's grounds can be sheltered—impossible that every man can select a situation protected from the west and north by woods or hills. We grant this. We know it is not in the power of many of those even who purchase *new* places to plant themselves directly behind some natural protection; the country has been pretty well “cleared” of timber, and we must take it just as it is. What we advise, however, is this: that people who are about to purchase land for the purpose of planting extensive orchards, nurseries, or market gardens, should, even at great sacrifices, select a sheltered situation. Ten or fifteen dollars an acre in the first cost of land would be an important consideration in purchasing for farming purposes, but for orcharding, nursery, or market gardening, where the crops are of great value and easily damaged, it is as nothing compared to the advantages of a favorable situation. Experienced cultivators understand this very well; but beginners are apt to overlook it.

When an exposed situation is unavoidable, then the very first step should be to provide shelter in the speediest possible manner. For this purpose, belts of rapid growing trees—say double rows—should be planted so as to intersect the ground at intervals, and ward off the prevailing and most injurious winds of the particular locality. In Western New York the most prevalent and destructive winds are those from the west and north-west, and therefore our protecting belts of trees must run north and south—or perhaps better, a little north-west and south-east. The degrees of exposure and the character of the crops to be grown must regulate the distance between the rows or belts of shelter trees. For the purpose of shelter we know of no tree more suitable than the European Larch. In good dry land it makes a growth of three or four feet in a season; it retains its branches well at the bottom, assuming a pyramidal form; the tops do not spread far or shade the ground; the roots occupy a very small space, and never throw up suckers—besides it is a very beautiful tree, and can be easily raised from seed or purchased at a low price in the nurseries. Single rows of this might be managed so as not to occupy more space than a common hedge, and they would afford protection to considerable extent of level ground. The Norway Spruce is another excellent tree for this purpose, and it has the advantage of being *evergreen*; but it requires at least double the time to attain a height that would afford much protection except to small plants. The American Arbor Vitæ and Hemlock Spruce may be very properly used for this purpose, too; but neither of them are of such rapid growth as the first two named. The Lombardy Poplar, Balsam Poplar, Snowy Abele, and Silver Maple, are trees of which a very effective belt or forest may be made in six or eight years. Their growth is almost incredibly rapid, and this is the very purpose for which they are valuable. They cannot with propriety be planted through the interior of plantations, as we advise to plant the Larch, Spruce, Hemlock, and Arbor Vitæ, but they can be placed around the exposed borders and outlines, and do essential service.

In the culture of dwarf trees, flowers, vegetables, and all of low growth, common hedge rows of Buckthorn, Privet, Osage Orange, or, any rapid growing shrub, will be of great service. It would not be necessary to plant them in the usual

way for fences, but just enough to give them the necessary strength and compactness required for the purpose of protection against the elements. Those who have seen the gardens and nurseries of Europe know how highly hedges are esteemed for shelter; in fact, they are considered indispensable. In SKIRVING'S nurseries at Liverpool there are many miles of them, intersecting the ground in all directions, to break off the cold sea winds that, but for the hedges, would prevent the culture of many tribes of plants that are now grown most successfully.

In the second volume of the *Horticulturist*, page 58, Mr. DOWNING gave an account of Mr. TUDOR'S gardening at Nahant, which furnishes a very striking illustration of the benefits of shelter. We must give it in Mr. DOWNING'S own words:

"Of course, even the idea of a place worthy of the name of a garden in this bald, sea-girt cape, was out of the question, unless some mode of overcoming the violence of the gales and the bad effects of the salt spray, could be devised. The plan Mr. TUDOR has adopted is, we believe, original with him, and is at once extremely simple, and perfectly effective. It consists merely of two, or at most three, parallel rows of high open fences, made of rough slats or palings, nailed in the common vertical manner, about three inches wide, and a space of a couple of inches left between them. These paling fences are about sixteen feet high, and usually form a double row, (on the most exposed side a triple row,) round the whole garden. The distance between that on the outer boundary and the next interior one is about four feet. The garden is also intersected here and there by tall trellis fences of the same kind, all of which help to increase the shelter, while some of those in the interior serve as frames for training trees upon.

"The effect of this double or triple barrier of high paling is marvellous. Although like a common paling, apparently open and permitting the wind free passage, yet in practice it is found entirely to rob the gales of their violence, and their saltness. To use Mr. TUDOR'S words, 'it completely sifts the air.' After great storms, when the outer barrier will be found covered with a coating of salt, the foliage in the garden is entirely uninjured. It acts, in short, like a rustic veil, that admits just so much of the air, and in such a manner as most to promote the growth of the trees, while it breaks and wards off all the deleterious influences of a genuine ocean breeze—so pernicious to tender leaves and shoots."

A valuable lesson is taught by this mode of successful gardening under difficulties. We commend Mr. TUDOR'S example to men who are continually lamenting the sacrifices they have to make on account of their exposed situations, and yet make no effort whatever to improve it. Providence will not work miracles in our behalf. Every man who cultivates the earth must contend with the elements; and now that in this country we are making some serious attempts at gardening, we expect to see such a thing as shelter, which is the very foundation of success, receive due attention. It is worthy of note that we generally find, both at home and abroad, the best examples of gardening where the greatest difficulties have to be met. In the best climates, where tolerable success can be obtained without any special effort, improvements are apt to be slowly made. *Blackwood's Magazine* was not far wrong in classing "a moderately bad climate and a tolerably sterile soil," among the "prerequisites necessary to originate and cherish a love of horticulture." They are certainly necessary to awaken energy and forethought.

THE BARTLETT, OR WILLIAMS' BONCHRETIEN PEAR.*

WE trust the well-informed readers of the *Horticulturist* will not take it amiss that we offer them in our frontispiece a portrait of one of the best known and most popular pears in America—the *Bartlett*. We are well aware that we can scarcely say anything of this fruit that is not perfectly well known to all fruit-growers of experience, for scarcely any man in the country plants half a dozen pear trees without including one or two *Bartletts*; but there are thousands of beginners in fruit-culture who are at this moment informing themselves, as well as they can, respecting what varieties to plant, and who are, after all, as ignorant of a *Bartlett* as they are of the greatest novelty in all the catalogues—and perhaps more so, for now-a-days the papers say much more of novelties than of good old established sorts. For the particular benefit of such people we give the *Bartlett* a place at this time, and we commend it heartily to them as every way worthy to be placed at the head of their selections. No other variety we can name has stood the test of so many climates and localities as this. Literally from Maine to Georgia we hear of its successful culture, with here and there an exception. At all the pomological meetings that have been held, no other, we believe, has been so unanimously placed upon the lists for general cultivation. It is an especial favorite with the New England cultivators, and is so extensively grown there as to be abundant and cheap now in the Boston markets.

It was originated in Berkshire, England, about the year 1770, and was introduced by a Mr. WILLIAMS, a nurseryman near London, and there called *Williams' Bonchretien*, which name it is still known by in England. In the French and Belgian catalogues it is called "*Williams*," or "*Poire Guillaume*"; latterly they add "*Bartlett of the Americans*." The name *Bartlett*, by which it is almost universally known in this country, was originally given to it in consequence of being imported and first grown here by ENOCH BARTLETT, of Dorchester, Mass., who lost the name under which it was sent to him. It was sent from England to Mr. BARTLETT about the year 1799, so that it has been now upwards of half a century in this country; but it has not been widely known more than half of this time. In *Kenrick's American Orchardist*, edition of 1833, it is classed among *new varieties*. At the present day it is, we think, more extensively propagated in the nurseries than any other variety, save, perhaps, the *White Doyenne*, the staple of the pear trade in Western New York.

Fruit—large; on young vigorous trees often *very* large, in some cases weighing a pound. Form—pyramidal, irregular. Surface—quite uneven. Skin—smooth, light yellow, with a delicate blush frequently on the sunny side. Stalk—stout and fleshy, an inch to an inch and a half long, and but slightly sunk. Calyx—open, shallow. Basin—very slightly plaited. Flesh—white, fine-grained and buttery, with a rich musky perfume, not wholly agreeable to many tastes; ripens all through Sept. Few pears admit of being picked so soon as the *Bartlett*, for they ripen well when gathered even before they are fully grown; and this quality is of great value, as it allows them

* See Frontispiece.

to be picked and transmitted to markets at a considerable distance. The tree—a handsome, erect grower, vigorous, and exceedingly productive, bearing quite young, both on pear and quince. It is readily distinguished by its narrow folded leaves and yellowish shoots. It takes and grows well on the quince, but is so disposed to fruitfulness as to become very soon enfeebled, unless pruned pretty close annually, and the soil about its roots kept in a condition to afford abundant nourishment. The reason why this pear is short-lived on the quince is, that the course of management is not adapted to its habits.

RAISING FRUITS FROM SEED.*

WE know of no subject on which we can more profitably offer a few observations at this time of the year than that of raising fruit from seed. We are every year ransacking foreign countries for new varieties; we are not satisfied with what we have, and we never shall be. It is in the nature of man to seek for novelties; and it is well, on the whole, that it is so. We shall not say a word against this, but we wish to commend to people's attention the abundant means which nature has placed within our reach to produce new varieties here, at home, on our own soil.

Shall we neglect these? We hope not. There seems, fortunately, at the present time, a disposition in the public mind favorable to the improvement of home resources in a gardening sense, and the raising of seedling fruit is certainly one of the most important. Just enough has been already done to show what we may do, and afford us encouragement to proceed. Dr. KIRTLAND's cherries, Dr. BRINCKLE's raspberries, and many varieties of strawberries, all of much merit, are recent additions to our lists of fruits, raised from seed in the simplest manner, without any regard to the niceties of hybridization; so we can count up fifteen or twenty first rate American seedling pears, and every locality can boast of its favorite and peculiar seedling apples, some of which, and indeed many of which, have a national reputation, all grown from chance seedlings.

Now, in fruit-growing it is of the highest importance that every man cultivate such varieties as are best adapted to his soil and climate. One of the great problems which pomologists are at present endeavoring to solve, relates to this very point. As botanists have divided the surface of the earth into zones of vegetation, each of which is characterized by a peculiar flora, by the prevalence of certain trees, and shrubs, and plants that flourish there, and there only; so in fruit-culture it is believed necessary to map off this great country of ours, embracing such a variety of climate, into pomological zones, in each of which certain fruits will succeed better than elsewhere. On this pomological chart, which our American Pomological Society, if it live and thrive, will one day appoint a commission to draw up, we shall see clearly defined the exact limits of successful cultivation of our *Bartletts*, *Seckels*, and *Virgalieus*; our *Newtown Pippins*, *Baldwins*, and *Spys*; and this will certainly be a most interesting and

* From the *Genesee Farmer* for July, 1868.

valuable map. But it may be a long time yet before it is completed, or before we shall have collected the great mass of facts and statistics which the execution of the work will demand.

Meantime, we must urge upon fruit-growers, both professional and amateur, every man or woman, every boy or girl, who can obtain seeds of fine fruits, to plant them and rear them into bearing trees. We think it scarcely admits of a doubt but that this is the true way — we had almost said the *only* way to obtain varieties completely adapted to all local circumstances; we can read this plainly in the history of nearly all our native fruits. As a general thing, their culture is most successful in the region of their origin. Some, like certain genera of plants, are confined to narrow limits, beyond which they do not appear to prosper; others admit of a greater diffusion, and adapt themselves to a greater variety of circumstances.

We find the most forcible illustration of this in the case of northern and southern fruits. The *Fameuse*, *Pomme Grise*, and some other apples of the north, are best in the coldest latitudes, and fail as they go south, until they become worthless before they reach the Mississippi. So with southern fruits, like the *Rawles' Janet*, *Tewkesbury Winter Blush*, &c., that succeed only where the seasons are very long, and are entirely worthless in the north, where the spring opens about the first of May, and autumnal frosts come as early as the first of October. We believe the *Porter* and *Baldwin* are no where so good as in Massachusetts; the *Newtown Pippin* is best on Long Island and the Hudson; the *Spitzenburgh* in New York, &c.

Aside from the unquestionable facts of the case, it is clearly natural that this should be so. A variety springing up from seed in any given locality, is, in the course of its production, endowed with a constitution and habits adapted to that locality in a particular manner—just as men are more at home in the climate and mode of life of their native country than in any other, and are, in a measure, proof against local diseases that strangers would immediately fall victims to. This is all in strict conformity to the wise, harmonious laws, that regulate and govern all nature, animate and inanimate.

Now, we are an impatient people—a “fast” people, to use a current term—and we are quite loth to embark in any thing that does not promise immediate results. Our young men greatly prefer hazarding their lives for the chance of securing a lump of California gold to working a fortune patiently but surely out of their paternal acres. To such people, raising new and fine fruits from seed, where perhaps not more than one in ten thousand may be a prize, is a slow business, and any thing we may say will probably fail to convince them that it is not quite so slow as they imagine. But we shall try, nevertheless.

Suppose, for instance, we wish to produce some seedling strawberries; we take the finest berries of the best kinds we can procure; they must be perfectly ripe; we either wash the seeds out of the pulp, or we crush the berries, and spread out pulp, seeds, and all, to dry. We then sow either the clean seeds, or dried pulp and seed, in light earth, and by autumn we have nice plants. These we protect during winter with a

covering of leaves, and the next spring we plant them out into beds. The following season they will bear, and we will be able to see whether we have gained a prize or not. Raspberries, Currants, and Gooseberries, are managed exactly in the same way, and will fruit in the same time. This is not a tedious process. Three years, or four, enable us to arrive at some results with these small fruits, and very important fruits they are. Now it would take as long as this to raise a colt fit for market; and a first rate new Strawberry, Currant, or Raspberry, is worth two or three good colts at least, and it might be half a dozen.

Peaches are easily raised from seed, and come quickly into bearing. Every one knows how to raise Peaches from seed. The fresh pits may be transferred at once from the pulp to the ground, and in three or four years it will yield fruit. Pears and Apples are more tedious; but there is a way to manage these to obtain early results. Suppose, now, in 1853 we collect seeds of the finest Apples and Pears; as we take them from the fruits we place them in sand or earth until we have done collecting; we then plant them in fine, well prepared earth. Next spring they will grow, and in the autumn of 1854 we shall have yearling plants. While yet in leaf we select the most promising subjects—such as show in their features the greatest degree of refinement; then, instead of waiting for these to bear, which would not happen for ten years perhaps, we bud or graft them into bearing trees—dwarfs, if we have them—and in two years or so we will fruit them. Plums and Cherries are managed in the same way.

Now we think that no reasonable person who has patience enough to wait for the ordinary seed time and harvest, could call this a *very* tedious process. Aside from the advantages which it offers, the raising of seedling fruits is full of instruction and intensely interesting, as every one can testify who has given it a trial. We shall have more to say on this subject hereafter.

A FEW HINTS ON BUDDING, OR INOCULATION.

BUDDING, or *inoculation*, is one of the most general, and, in this country, by far the most important method of summer propagation. This operation consists in removing a bud from the variety to be propagated, and inserting it on another which is called the stock. Its success depends upon the following conditions: In the first place, there must be a certain degree of affinity between the stock and the parent plant from which we propose to propagate. Thus, among fruit trees, the Apple Crab, Pear, Quince, Mespilus, and Mountain Ash, all belong to the same natural family, and may be worked upon each other. The Plum, Apricot, Nectarine, Peach, and Almond, form another natural division, and work upon each other. The Cherry must be worked upon some kind of Cherry, and Currants and Gooseberries go together. In general practice the Apple is worked either upon Apple seedlings, which are called free stocks, or upon the *Doucain*, or *Paradise*, which are dwarf growing species, and are used for

the purpose of making small trees. The Pear is worked either upon Pear seedlings, which are called free stocks, or upon the Quince, to make dwarfs; occasionally it is worked upon the Mountain Ash and Thorn. But it must be borne in mind that while all varieties succeed on the Pear seedling, a certain number fail entirely on the other stocks we have named. Lists of such as succeed particularly well on the Quince will be found in previous numbers of the *Horticulturist*. The Cherry is worked either upon seedlings of what is known as the *Mazzard*, a small, black, sweet cherry, that forms a very large, robust tree; or, for dwarfs, on the *Mahaleb*, or perfumed cherry, which is a small tree with bitter fruit, about as large as a common pea.

In the second place, the buds must be in a proper state. The shoot, or scion budded from, must be the present season's growth, and it should be mature—that is, it should have completed its growth, which is indicated by the formation of a bud on the point, called the *terminal bud*, and the buds inserted should all be wood buds. On a shoot of this kind there are a number of buds unsuitable for working; those, at the base, being but partially developed, are liable to become *dormant*, and those on the point, where the wood is pithy perish. The ripening, or maturing of the buds, must regulate the period of budding, so that the time at which any given tree, or class of trees should be worked, depends upon the season, the soil, and other circumstances which control the ripening of wood. In our climate Plums usually complete their growth earlier than other fruit trees, and are, therefore, budded first; we usually have ripe buds by the middle of July. In some cases, when the stocks are likely to stop growing early, it becomes necessary to take the buds before the entire shoots have completed their growth, and then the ripe buds from the middle and lower parts are chosen. Cherries come next, and are generally worked about the first of August. The buds *must* be mature, or a failure will be certain.

In the third place, the stock must be in the right condition—that is, the bark must lift freely and cleanly from the wood, and there must be a sufficient quantity of sap between the bark and wood to sustain the inserted bud and form a union with it. Stocks, such as the common sorts of Plum, Pear, and Cherry, that finish their growth early, must be worked early; while such as the Peach, Quince, wild or native Plum, *Mahaleb* Cherry, &c., that grow late, must be worked late. If these stocks that grow freely till late in the autumn be budded early, the buds will be either covered up—"drowned," as it is technically called—by the rapid formation of new woody substance, or they will be forced out into a premature growth.

A very great degree of sappiness, in either the stock or bud, makes up, in part, for the dryness of the other. Thus, in the fall, when Plum buds are quite dry, we can work them successfully on stocks that are growing rapidly. This is a very fortunate circumstance, too. Young stocks with a smooth, clean bark, are more easily and successfully worked than older ones, and when it happens that the latter have to be used, young parts of them should be chosen to insert the bud on.

In localities where buds are liable to injury from freezing and thawing in the winter, the buds are safer on the north side of the stock, and when exposed to danger from wind, they should be inserted on the side facing the point where most dangerous

wind blows from. Attention to this point may obviate the necessity of tying up, which, in large practice, is an item of some moment.

In the fourth place, the manual operation must be performed with neatness and despatch. If a bud be taken off with ragged edges, or if it be ever so slightly bruised, or if the bark of the stock be not lifted clean without bruising the wood under it, the case will certainly be a failure. The budding-knife must be thin and sharp. A rough edged razor is no more certain to make a painful shave, than a rough edged budding-knife is to make an unsuccessful bud. It takes a good knife, a steady hand, and considerable practice to cut off buds handsomely, well, and *quick*. As to taking out the particle of wood attached to the bud, it matters little, if the cut be good and not too deep. In taking out the wood, great care is necessary to avoid taking the root of the bud with it. Then, when the bud is in its place, it must be well tied up. Nice, smooth, soft strips of bark, like narrow ribbons, are the best and most convenient in common use. Every part of the cut must be wrapped so firm as to exclude air completely; and this should be done as quickly as possible, as the air soon blackens the inner surface of the bark, and prevents the perfect union of the new parts that are placed in contact.

We have thus stated briefly, for the benefit of beginners, the chief points that require particular attention in budding, or inoculation. Amateurs, who have little to do, should choose the mornings and evenings, or cloudy, cool days to do their budding; but nurserymen must work in all weathers, and in all hours of the day; but their superior skill and quickness render it less hazardous. When only a few stocks are to be worked, and the weather happens to be dry, a thorough watering or two will be of great service in making the bark lift freely.

GARDEN FURNITURE.

We continue our extracts and illustrations from *McIntosh's Book of the Garden*: "Fig. 9 shows the elevation of the very elaborate moss-house in the grounds at Dalkeith Palace. It is now thatched with straw, but was formerly with heath. The roof projects four feet over the walls, forming a piazza or colonnade round the four sides, and is supported in front with oak rustic columns, and curvilinear brackets between. The floor is laid in manner of a brick floor along the front and ends.

"Fig. 10 is an elevation of the front wall under the colonnade, showing the casement windows, of which there are four in the building, the other two being placed one in each end. In front of these two windows are placed two rustic seats with open backs, which protect the glass, and, at the same time, do not much exclude the light. The mullions and frames of these windows are of oak, with the bark carefully preserved. The other parts are, as usual, of lead and iron, the center part of each opening for ventilation. The door is in two parts, and simply covered with thick pieces of oak bark on both sides. The door frame is the same as that of the windows. The

three panels over the door and windows are inlaid with pieces of oak, each cut into four sections, as are also the margins at the two ends. The roof of the colonnade all round is covered with different colored mosses within.

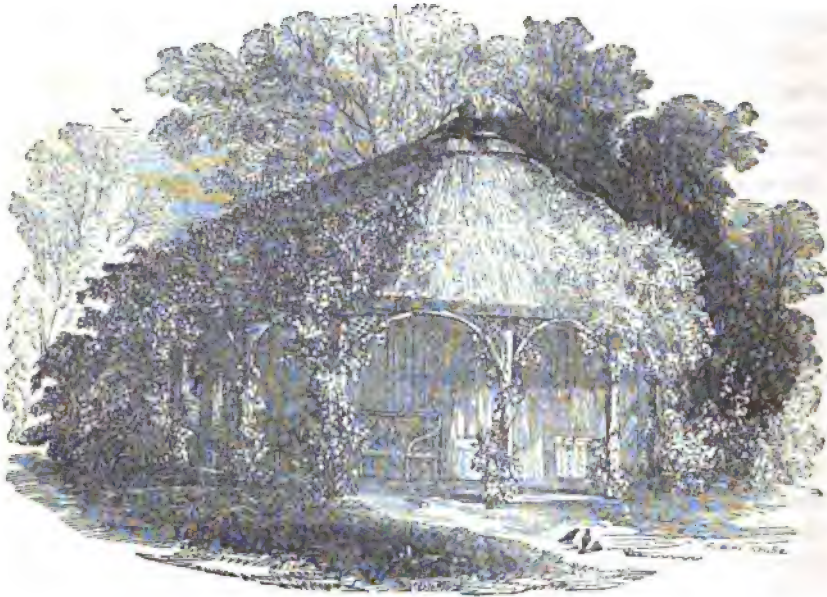


Fig. 9.



Fig. 10.

"Fig. 11 is the elevation of the two ends, showing the position of the windows. The surface is covered with shells, set in plaster of Paris, those under the windows being oyster shells, the other parts being done with smaller ones, found abundantly by the sea-side.

"The floor of the interior is of brick, not by any means in accordance with the other parts of the building. The seats are all portable, and consist of a sofa and six chairs, two of which are representations of arm-chairs, hollowed out of the trunks of two old oak trees, very much covered with excrescences: the others are light chairs.

formed of hazel, and the seats cushioned with *Polytrichum commune*. The sofa is also cushioned with the same, the back being open wickerwork. The table is circular, set on a clawed stand, and covered with a matting of *Polytrichum*.

"The side walls are covered with moss. In the center of the back wall is a representation of a ducal coronet, done in fir cones. The roof is of *Sphagnum palustre*, a white moss; and in the center is a stag, three-fourths of the natural size, (the crest of the Scotts of Buccleuch,) done in a very ingenious manner with small rods of young larch. A cornice runs round the interior, formed of spruce cones, (fig. 12, *a*.) with those of *Pinus sylvestris*, or Scottish fir, (*c c*.) and of both alternately, as at *d*, and square knobs of oak, divided into four sections, as at *b*.

"Summer-houses are and may be constructed in a great variety of forms, and of different materials. Very neat resting-houses may be formed of 4-inch quartering, set upon a base of brick or stone, so as to raise the timbers one foot from the ground. These may be lined on one or both sides with boarding, and that covered with imitation basketwork, or designs formed of larch, oak, hazel, or any other wood, selecting the smooth branches; or, if desired, it may be covered with cones of various species of pines, so arranged as to produce a very pleasing effect. The rough bark of trees—oak, for example—may be used to cover the whole, or the sides may be divided into panels, with pieces of branches or cones, and the panels filled in with smooth or rough bark, according to fancy. Similar houses may also be constructed, by covering the quartering with lath, and plastering with good sound hair plaster, the surface of which, while wet, may be dashed with clean gravel, pebbles, small shells, scorix, spars, &c., sifted so as to be of a uniform size. Shells of various kinds are often used for such purposes, and are stuck in while the plaster is soft, and very pretty devices are often formed by them. As this work requires to be done expeditiously, it is necessary to have the shells sorted and close at hand; and to render the pattern or design as perfect as possible, it should be traced on the plaster first; and this process will be much facilitated, if the pattern is cut out in sheet-iron, thin boarding, &c., which being laid on the plaster, the lines can be traced with great accuracy and despatch.

"Again, great variety of design may be given to the plastered walls. 'Lines may be drawn by the trowel, straight, wavy, angular, intersecting, or irregular. Stripes,

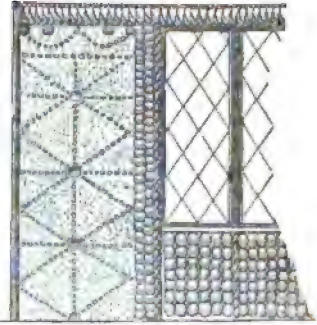


Fig. 11.

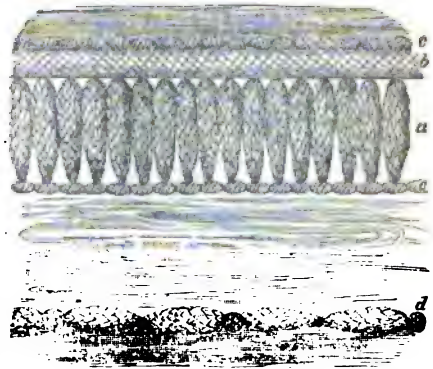


Fig. 12.

checks, squares, circles, or trellis-work, may be also imitated. Wickerwork is a very general subject of imitation, and this is produced by pressing a panel, generally a foot square, of neatly wrought wickerwork against the plaster when moist. It is evident that this description of ornament might be greatly varied and extended, and that, instead of the panel of wickerwork, wooden plates, of patterns such as those used by room-paper printers, might cover the walls with hieroglyphics, with sculptures of various kinds, with imitation of natural objects, or with memorable or instructive sayings, or chronological facts.'—*Encyclopedia of Villa Architecture*.

"Such walls may have the appearance of age given them by the process called splashing; but in this case they require to be thoroughly dried, if the splashing is to be composed of glutinous material, or in oil colors, which are by far the most durable. If splashing is to be done in water colors, it matters not whether the walls be dry or not. As a general rule in splashing or even plain-coloring walls with oil colors or with glutinous material, the walls should be thoroughly dry, and it should be done at a season when they are not saturated with moisture. 'The reason for these rules is, that water colors do not impede the evaporation of moisture from the wall, and the absorption by the mortar of carbonic acid gas, by which it is hardened and rendered durable; while glutinous colors, by closing up the pores of the surface, do both.'



Fig. 13.

with heath or reeds, and the whole exterior nearly covered with creeping roses, clematis, &c. The whole of the inside is covered with moss of the commoner kinds.

The floor may be clay or dark-colored concrete.

"Fig 14 is a very pretty garden seat. It may be attached to a stump, as in the drawing, or to a growing tree, which would be better.



Fig. 14.

"The fewer FENCES admitted into picturesque scenery, the better. Everything having the appearance of confinement, or defined limits, takes off from that freedom and expanse which form a leading feature in this style of gardening.

"It becomes necessary, however, under certain circumstances, to introduce them as means of protection; and when such is the case they may be used with propriety, for what is useful can not be in bad taste.

"The varieties of fences are numerous, and range from the rudest barriers, without nails or ironwork, to the highest grade of architectural pallsading. The fences admissible into the picturesque style should be of the simplest construction, and, excepting the ha-ha and *chevaux-de-frise*, chiefly of a rustic character. They are formed of young larch trees, generally on account of their being straight, and, being the thinnings of plantations, they are unfit for purposes requiring more strength.

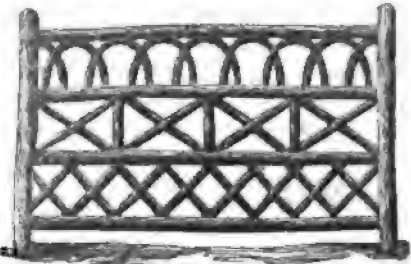


Fig. 15.

"Figs. 15 and 16 are of this description. They are generally fixed structures, although they may be easily constructed in separate pieces, and fitted up after the manner of portable hurdles. The side-posts or uprights should be of sufficient size to give, not only in appearance but in reality, the necessary strength. The longitudinal rails, or principal members, may be of less size; while the pieces used for the minor details should be proportionably more slender, as less strength is required of them. The chief difficulty in the construction of rustic fences is procuring proper material; and this difficulty is increased as we depart from straight lines. When curved lines are used, then dependence must be placed on wood of a flexible nature, such as the willow, hazel, mountain or common ash, &c. Much of the elegance of such fences depends on the correctness with which the joints are fitted together; and to do this in the best manner, mitred joints only should be employed. It is also of much importance, so far as appearance goes, that the bark of the wood be carefully preserved. No doubt rustic fences of peeled wood are often very prettily constructed; but these, till softened down by age, have a very harsh appearance, and few attempts at painting them have been very successful. Those colors which most nearly resemble the natural bark are the best, and greens and reds are the worst of all.

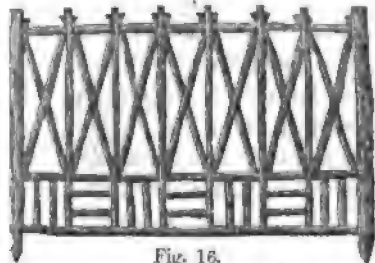


Fig. 16.



Fig. 17.

"The highest grade of rustic fences is represented by fig. 17. They may be made portable, and moved about like hurdles, or be stationary and in continuous pieces as far as the fence extends. They may be barked or unbarked, according to taste, but should never be painted.



HORTICULTURE.

BY J. J. SMITH, PHILADELPHIA, PA.

If there be two topics most likely to occupy deservedly the attention and regards of Americans beyond all others, those topics will be found to be Agriculture and Horticulture. Our tastes, and our wants, will require us to cultivate the earth; when politics fail to interest the active, when merchandising has produced its results, or when age makes us retire into ourselves and seek innocent resources from ennui, the garden is a sure resource, provided we have not neglected the opportunities so lavishly bestowed, and have kept pace with what is going on around us. To do this, it must be confessed, we must read occasionally, and study a little the books and periodicals devoted to the farm or the garden; these we shall mention as we proceed in our article—at least such as we are prepared by experience to recommend.

A man without a taste for gardening, is deprived of one of the very greatest enjoyments of life. Whether this taste can be acquired at a late period has been doubted; and therefore it is that at school city children should always have some instruction on the subject; and when it is practicable, a plot to cultivate under the stimulus of emulation.

As an example of the effects produced on a congenial mind, we will cite the instance of an extensive merchant, whose modesty will not allow the use of his name. *He* will know, however, whom we mean, by our thanking him, thus publicly, for a most superb basket of fine pears late in January from his own dwarf trees, planted, trimmed, and cared for by his own hands. In his school days he was so fortunate as to have a little garden spot “of his own;” there he toiled when Virgil and the conic sections were learned, and there he acquired his love. *LOUDON* and *DOWNING* have since been his constant companions, and you may see him in spring and summer, as he leaves his counting-house, and walks with an animated step to the steamboat that is to convey him to his beloved garden, pick up—not the political newspapers of the day, though of these he has his portion, too—but the “*Horticulturist*,” or the “*Cultivator*,” on the road he hastily peruses these, and when he enters his premises of a few acres, all under fine cultivation, with what enjoyment does he greet his children; all are his children, from the romping little curly heads to the curled celery and savoys; his dinner is ready, but he must stop as he ascends the path to give a little relief to a favorite vine or carnation, or snatch a strawberry, larger than any previous product, to display to his wife at the desert. Dinner is rather hastily despatched; with a child in each hand, behold him take the round of the green-houses, the graperies, the chicken-houses, and the little orchards and paddock. See him meet his gardener! There is no talk of copper mine stocks, or the money market. Dry goods are forgotten in the progress of the asparagus, and the crusade against the curculio; the apricots are inspected, and proper attention given to the promising cherries; the pruning knife is judiciously applied to the dwarf pears to give them the result we have indicated as so acceptable to ourselves; there is a little pinching off of the too luxuri-

ant growth to produce fruit spurs for next year; the mulching of the roots is seen to; the string of one of the props is adjusted, and the label which has fallen from the "*Duchesse*" is repaired and replaced. A little digging and raking, while the children run for the evening food for the poultry — our merchant, refreshed, not wearied, turns to the sun to see his last setting rays, and almost to reproach him for going to bed thus early, and oblige him to leave his favorites. Ah! before he turns in, in the approaching darkness, he just takes ten minutes to adjust the net over a favorite cherry tree—peeps under the leaves of his gooseberries and currants, and rejoices to see the fructification of the prolific buffalo-berry, which he has planted purposely to supply the frugiverous song birds.

Can this man ever want amusement? When fortune has smiled upon his mercantile transactions, will he be dependant upon foreign buffo singers, and sicken at the thought that there may be no opera? If fortune frowns, he has a pursuit; he could at any time change his occupation in the city and become a nursery proprietor, or send to market the finest fruits and market products.

We have already several such instances, one of which we must mention, because it has originality as well as utility. In one of the crashes which mercantile communities are all subject to, now and then, an extensive dealer was obliged to "stop;" the particular trade he carried on was overdone, but he had enough means remaining to retain about twenty acres of good land near one of our principal cities. To this he determined to devote his attention; his taste for rural life, not neglected while in prosperity, now came to his aid. This was years ago, before the great demand had brought supplies, even yet inadequate, to our doors. With much tact, our rural merchant plowed up and manured his land for the coming spring, leaving only space for a kitchen garden to gratify his family; in this he planted a few fruit trees, to be increased in number afterward. With the help of some old window frames, he forced one or two dollars' worth of celery seed, and planted the whole of his little farm with this valuable article. As it could be cultivated by the plow, principally, he had not a large sum to expend in wages, and when it was ready for market some lumber and nails were procured; boxes were made by our "hero," for such we contend he was, sand was dried, the celery housed and placed, a hundred stalks in each box, and with confidence it was exhibited to ship-owners, ship-captains, and stewards. The whole was sold at five dollars per box, and a surplus over the year's expenses of the family was the result. Here was a great want of the human family supplied in an original mode—an example was set to as many as chose to adopt his plan, and we need not advert to the many dinners it made agreeable to delicate sea-faring passengers, or the scurvy which this benefactor prevented.

Instances like this are not so rare as our readers may suppose. New York has but lately been supplied with grapes from Croton Point, by a gentleman of enterprise and good taste, to whom it might, in our opinion, be as just to award a gold medal by Congress, as to the hero of a bloody battle.

Of late years, the attention of gardeners and amateurs has been much attracted to the cultivation of dwarf fruit trees. The advantages proposed to be attainable are, a

greater variety of fine fruit in a small space, and bringing the trees at an earlier date into active bearing. The latter suits our American wish to go-a-head; we cannot wait for a fruit tree, in the old mode of growth, for five or ten years—a life time in the United States. We must have fruit the next year, at the latest; and though there are other advantages attained by the dwarfing system, this rapid product has its attractions to the young and old Rapids who are forming orchards and gardens. You can now go to a nursery in the spring, order your fall fruits, and grow them yourself; you say, "*Duchesse d'Orleans*," "*Beurre Bosc*," "*Winter Nelis*," "*Moorpark*," "*Coe's Transparent*," and so forth, adding, "but be sure they are trees that will produce the present season." The nursery owner winks his left eye as an evidence that he understands the kind of customer on hand, and selects his trees accordingly. If they do not bear very heavy crops the first year, a little is better than none; the second and third they will amply reward the amateur. One nursery in the State of New York actually disposed of fruit trees the past season to the value of one hundred thousand dollars! Pretty good evidence this, if any were wanted, that we are becoming a fruit-growing nation. And why not? The utility is argument enough; the profit is a still stronger inducement.

Every kind of instruction in the art and mystery of fruit-growing may now be obtained from American books, without resorting to French, Belgian, or English authors, who have heretofore misled us, because we overlooked the differences of climate, and so forth. The late Mr. DOWNING, whom all horticulturists loved as a brother, led the way in our country to the development of our capabilities in taste and the luxuries of the garden; to him will always be conceded the first rank in these respects; in him we lost our instructor, guide, and friend. Incomplete his instructions may have been, for he had much in store to tell us; let us be grateful for what he imparted, and follow his example. He has been succeeded by others equally practical: *Barry's Fruit Garden*, and *Thomas' American Fruit Culturist*, are eminently instructive. The "*Transactions of the American Pomological Society*" should be in the hands of every lover of fruits; it contains lists of the best kinds suited to every locality, and without it the beginner would commit numerous mistakes by selecting trees that have been popular, but are proved, on trial, of inferior value. Reading on these subjects we consider essential; books, however, rarely tell *all* that one wants to know of a practical subject, and the amateur will do well to observe the proceedings of a successful neighbor regarding the cultivation and trimming, so essential in modern fruit-growing.

We have in this country several enthusiastic amateurs, whose great pleasure it is to enlighten their fellow citizens. Among them it will be proper to name WILLIAM D. BRINCKLE, M. D., of Philadelphia; Professor J. P. KIRTLAND, of Cleveland, Ohio; the Hon. MARSHALL P. WILDER, of Massachusetts; Dr. ESHLEMAN, of Pennsylvania; NICHOLAS LONGWORTH, of Cincinnati; and a host of others, who, by their enlightened science and liberal views, are sowing broadcast the results of their labors and discoveries, and conferring benefits on America which future generations will amply appreciate. These gentlemen take out no patents; it is their greatest pleasure, when they

have discovered by hybridizing or any other means a valuable production, to diffuse it among their countrymen, happy themselves if they can benefit others. A miser, in horticulture, is an unknown animal. Horticultural societies are now diffused throughout the length and breadth of our land; even New York city, amidst her lumber of bales and boxes from Europe and the east, has found time and space to have her own "Transactions" in horticultural science. There is taste enough lying dormant among her citizens to give her a first position in this respect, and we are not sure but that her own vicinity has advantages for such pursuits beyond any of her sisters. The constant arrival of steamships from every climate, affords the opportunity of the early reception (in WARD's cases, or other modes,) of plants, seeds, and trees; and the demand for fruit, flowers, and vegetables within her own limits, must be the best on the continent. Let her infant society persevere, as indeed there cannot be a doubt that it will. Philadelphia and Boston are "ahead" of her in this respect, but when did she ever run a race in which she was not in the advance at last? She has private conservatories, and public nurseries, that rival those of her neighbors, and at this moment the State furnishes a large portion of the trees demanded by the commerce in these valuable articles.

It would be ungracious to close an article without naming the pleasure and profit to be derived from the successful culture of a kitchen garden. Here we must again mention our friend who rejoiced in his first successful experiment in celery. He continues his supply of that delicious vegetable, but hearing a European gardener make the true remark that Americans in the country never worked or employed their time to full advantage in the winter, he set himself to consider what article of consumption would best pay for outlay, at a season when nature declines, without assistance, to yield her fruits to man. Asparagus seemed to promise this result. After a trial, in a small way, he now forces this article on an extensive scale. His calculation is, that ten families at least, will give a dinner party every day, and be glad to give him a dollar each for this delicious dish out of season; if they do, and beyond a doubt they will, his winter beds of asparagus alone will more than pay for all his manure and wages for the year!

To those who design to make the most of their vegetable gardens, we especially recommend the perusal—not once only, but often—of *McMahon's Kitchen Gardener*. Abridgments are numerous, but experience has convinced us that it is the best work issued from the American press. Ample evidence of the diffusion of a taste for the subjects on which we have delivered a brief discourse, is afforded by the large sale of books exclusively devoted to Arboriculture and Horticulture; a second edition of those six beautiful volumes of *Michaux & Nuttall on American Trees* is now in press; the *Horticulturist* has thousands of eager subscribers, and other periodicals are equally successful. The readers of such works must have science and enthusiasm on their topics, but their intelligence does not stop here. The agricultural interest of New York is just now roused to the great want of their State, and they are urging on their Legislature the publication of an accurate map of the State, with definite infor-

mation as to the products and population of every county, for the use of schools and private persons. Such an example will not be lost on other States. New York will in this be the pioneer, as she has so often been in other things, and will complete what she began in her scientific explorations.

SEXUAL CHARACTER OF THE STRAWBERRY.

BY THOMAS MEEHAN, GARDENER TO CALEB COPE, PHILADELPHIA.

SO MUCH has been said and written on this subject, that there seems to be room left for very little more. I have long felt with your illustrious predecessor, that the prevailing notions about the sexes of strawberries have become, with some, a *hobby*, which, "like most hobbies, has galloped considerably beyond the boundaries of sober truth."—(*Fruits of America*, p. 523.) I would like to offer a few words on the subject.

A short time ago the *Alice Maud* strawberry was under discussion in the *Farm Journal*. Some fancied their's incorrectly named. They were advised to wait and examine its sexual character, before judging of its authenticity. I had been for a long time experimenting on the sexes of strawberries, and had come to the conclusion that there is no *constitutional* difference between a pistillate and hermaphrodite strawberry plant.* A *pistillate* flower has *rudimentary* stamens. Unfavorable circumstances prevented their development; had these been favorable, the flower would have been perfect. These circumstances often act on the original plant of any given variety, even while the germ lies in the ovary of its parent, and thus give it a *tendency* to vary with the circumstances of *cultivation* or *accident*. This difference between a constitutional and an accidental tendency will be better understood by looking into a *double flower*. Take the Chinese Primrose: we may put a plant of a single variety into the richest soil, and do our best to excite *luxuriance*, but that plant will never produce a double flower; *that* is contrary to its constitutional character. But the double variety requires only to be neglected—suffered to become starved and stunted, and the *accident* which at its origin gave the stamens a tendency to become petals, is successfully opposed, and the flowers return to their perfect normal state. This illustration helps us considerably in getting to the bottom of the strawberry question; because we know that as *poor treatment* induced the petaloid stamens to return to their natural condition, *luxurious circumstances* must have been the accident that originated the tendency to depart from it. For, though we have not yet learned what precise cause first induced the strawberry to depart from its hermaphrodite state, we have the analogy of other plants for supposing it to be accidental. This supposition is more than strengthened by the fact that in England among seedling strawberries hermaphrodites are the *rule*,† pistillates the *exception*; while in this country the

* To avoid misconception it would be well to observe that only two distinctions are recognized in this district. When the term *staminate* is used it is understood as *hermaphrodite*.

† In England no pistillate seedling would be saved.—Ed.

rule is *reversed*. Does this not seem to indicate that the difference is caused by *climatic influences*, whether or not the above reflections are sufficient to form the hypothesis that the cause is *accidental*, not *constitutional*, and consequently that circumstances which may oppose these accidents may "render the distinction between pistillates and staminate worthless, cultivation producing either one or the other?"

By using this expression in my paper read before the Horticultural Society of Pennsylvania, I have shocked the preconceived notions of many. I cannot help it—I repeat it; for not only is it consistent with physiological laws, as I have just shown, but also borne out by experience and observation. In the paper alluded to I have shown that runners taken from a pistillate plant, differed from their parent seven to five; and also that in runners taken from the same bed produced one hundred plants which under one state of circumstances became *all pistillates*, and another hundred, under different circumstances, became *nearly all perfect*! I exhibited plants of *Hovey's Seedling* having hermaphrodite and pistillate flowers, and *both on the same plant*. But this does not seem to be enough to convince that, *as a distinction*, the classes are worthless. Well, sir, I have here a level terrace formed on the fall of a slope. One end of this terrace rising from the level of the ground; the other being about ten feet above. On this terrace there is a strawberry bed of what I consider to be *Burr's Pine*, although planted two years ago for *Hovey's Seedling*. But the name is of no consequence for the fact I wish to mention. They are grown in rows; six or eight of the rows, on the elevated end, were composed of *pistillate* plants when they first came into flower—the remainder were perfect. Before they ceased flowering, the *whole*, with the exception of one solitary plant, became perfect. A gentleman who looked over this bed when they first opened, and a firm believer in the constitutional distinctness of sexual characters, came to the conclusion that the pistillate flowering plants "must be some other kind"—supposing them at that time to be *Hovey's*. This has been the only argument that I have met with on any occasion, where I have pointed out hermaphrodite flowering plants among pistillate ones—or the contrary, that "some other kind *must* have got in by accident." I was at a loss, for a while, how to convince others who had thus decided—till, one day, pointing out to a gentleman *perfect flowering* plants among the so-called *pistillate McAvoy's Extra Red*, and being met with the same objection, "that an erroneous kind had got among them," I was led to a close examination of each individual plant; coming direct from Mr. LONGWORTH I could not doubt their correctness. The result was, that the hermaphrodite flowering trusses were found to proceed from the *same individual roots* as the pistillate ones. I sent you a root for verification, which I presume you received.*

I have been elaborate in explaining what I *do* believe in, because I do not wish to be confounded with what I *don't*. I do *not* teach that it is worthless to inquire whether you have pistillate or staminate plants. I have known to my vexation what it is to have a whole set of strawberries become pistillate, and should have undergone another trial but for a fortunate present of a staminate *Cuthill's Black Prince* from Mr. BUIST, in flower, from which I fertilized the whole. What I wish is, to

* We did not.—Ed.

excite inquiry as to *why* the sexes vary; so that by knowing the *cause* we may be able to control the *effects*. If the sexual character be constitutional, then I admit my endeavors to show that a plant may change from a pistillate form to a hermaphrodite, and so on, are, as Mr. PRINCE says in the *Farm Journal*, "calculated only to excite ridicule," and we must be content in our forcing-houses to be always in doubt whether we are to have a crop or not until we see the berries; and in our gardens treasure up and encumber the ground with varieties we do not want, for no other purpose than to give a certainty to those we do. But if I can show that the cause is accidental, and consequently perfectly under our control, I think I shall be doing a service to horticulture of which I shall be proud.

[Our readers well remember how threadbare this question was worn a few years ago. The doctrine and practice of Mr. LONGWORTH and the Cincinnati growers came off triumphant, and the almost uniform course among planters from that to the present time has been to mix the two sexes in order to secure a good crop. This works well in practice, at any rate. Mr. MEEHAN holds that a deficiency of stamens, such as we find in *Hovey's Seedling*, *Burr's New Pine*, &c., is not *constitutional*, but *accidental*, and "perfectly under our control." We are compelled to disagree with him on this point; for, as long as we have grown these varieties, we have never seen a plant with perfectly developed stamens; and of several pistillate seedlings of our own raising the same thing may be said. It seems just as constitutional for them to be defective in stamens, as it is for the *Early Scarlet*, *Iowa*, and such as these to have them fully developed. It is true, we see upon close inspection slight differences in the degree of development of the rudimentary organs on pistillate plants, but we never see them with *perfect* stamens. We do not believe it impossible for pistillate plants to produce fruit without the aid of staminate, for we have seen abundant evidence to the contrary; but the crop is generally very inconsiderable and the fruit imperfect. The past season, however, we had a very fair crop of *McAvoy's Superior* in a situation where we supposed it beyond the reach of staminate flowers. *Schneike's Hermaphrodite* (as we supposed) was planted near it; but this proved a pistillate plant, sent us by mistake.

We think it very possible that climate has something to do in forming the character of seedling strawberries, as well as other plants. But why are these peculiarities produced by climate *not* constitutional? The *British Queen* does not become pistillate here, nor do we think that *Hovey's Seedling* will become staminate in England. The Weeping Ash is an accidental variety, but the habit is fixed and therefore constitutional as much as anything can be. Our experience in forcing or flowering strawberry plants with artificial heat under glass has not resulted like Mr. MEEHAN'S. Out of forty different varieties that were flowered in pots last spring, and carefully examined, wholly with a view to detect possible varieties from the usual sexual characters, we found not one. But Mr. MEEHAN'S experiments speak for themselves.]

PRESERVATION OF TREES ON TOWN PLATS.

BY T. M. COOLLY, TOLEDO, OHIO.

IN all parts of the Western States are springing up towns that grow with great rapidity. Some of these are destined to rival the Atlantic cities in population and importance; many others will become second class towns of note, while a still greater proportion, though destined to an humbler rank, have still an equal interest with their more fortunate neighbors in attaining and preserving a character for pleasantness and beauty.

The sites of many of these towns are beautiful beyond description. Nature has spent centuries in growing and perfecting for their adornment the most graceful and most magnificent forest trees. She has diversified the surface with hill, and plain, and dell; she has sent sparkling rivulets among the woods, and festooned the trees with the ivy and the grape. The Oak, and the Elm, and the Maple, mingle their diverse beauties together, while modestly beneath their shade are to be found the less ambitious but scarcely less indispensable trees that are needed to complete the picture.

Unfortunately the founders of new towns are apt to be people who fail to appreciate sufficiently such beauties. They are men whose thoughts are bent upon speculation, and who find their highest and almost only enjoyment in the rapid acquisition of wealth. They call around them to build their houses, dig their canals, and construct their railroads, a population principally of needy emigrants, transient persons, who go to and fro with the demand for labor, and who, having no permanent interest in the place, are only anxious while they remain in it to use as little as possible of their dollar a day in current expenses. Among such a population a tree is of no value, except as it may be turned into lumber or firewood. Robbery of the woods is universally esteemed fair plunder, and while the Yankee is stealing from the forest its best timber, the Irish and the German laborer is cutting his fuel from the remainder, with an equal disregard of titles and of division lines.

During the present season I have occasionally spent some time in the outskirts of the town from which I write, and which is a sample of many such places. But although it has suffered severely in the manner alluded to, it is not yet so unfortunate but that, if the evil be now checked, a considerable portion of its natural adornments will remain. The front of the town is already denuded of its trees, but elsewhere, in the direction of its growth, and in close proximity to its building, are still to be found forest trees in great variety. Magnificent Oaks—the growth of centuries—have stationed themselves at little intervals in all directions about the city. These Oaks, if properly appreciated, are invaluable; for they give us, ready grown, such grand old shade trees, as generations must wait for from our own planting.

A younger growth of Oaks in great variety is also here to be met with. The White, the Red, the Black, the White Swamp, the Scarlet-leaved, the Chestnut, the Willow-leaved, and perhaps other varieties that do not now occur to me, are here to be met with, and a selection of foreign trees could scarcely be made that would give

greater beauty to a place than this family of Oaks. These trees are young and thrifty, and have sprung up since the Indians were driven from their hunting grounds hereabouts, before which time the young growth was kept down by an annual burning-over of the openings.

Here also are to be occasionally found the Sugar and the Scarlet-flowering Maple, and the graceful Elm is scarcely ever out of sight. The Buckeye is also frequent; the Honey Locust throws out its long, thorny branches on all sides; the Aspen is to be seen in the neighborhood of the stately Ash, and now and then a Mulberry, with the Black Walnut, the Butternut, the Plane, and the Linden, complete the picture. No! not complete it, for the Hickories are all about us—rugged and sturdy, but full of unpolished beauty, and deserving all the better care in their preservation where they have planted themselves, because of the impossibility of transplanting them. The Buttonwood, the Tulip tree, and the Willow, are also to be found in particular localities, and the Glossy-leaved Thorn, the Dog-wood, the Cherry, the Balm of Gilead, and the Sassafras in others. The Red Cedar, that once grew along the banks of the Maumee, has unfortunately been already exterminated, and the lovers of rural beauty mourn its departure as that of a cherished friend. But the list already given is sufficient to show how profusely and variously the ornaments of nature still adorn this neighborhood.

A proper degree of care on the part of the citizens, and the protection by the city authorities of the trees standing along new streets, would give to a town thus naturally favored, a pleasant character and appearance that few places ever attain—and that, too, with little trouble and less expense. It is not necessary to plant, but only to select and save. Every citizen may build his house under the shade of noble forest trees, and every street may be lined with them in considerable variety, and of all sizes.

It seems a matter of surprise that such advantages fail to be appreciated; but it is very commonly the case that the forest trees are all cut away before the inhabitants take a thought about shade trees. This is about as reasonable as cutting off a beautiful head of hair to make way for a wig. In Adrian, Mich., a place now unsurpassed in the horticultural taste of its inhabitants, scarcely a tree can be found standing along the streets where it originally grew. The noble Oaks, and Elms, and Hickories that were found upon its site, have been levelled with the earth, and its citizens are now lamenting the bereavement, and waiting impatiently the slow growth of those they have planted. The last of the Elms that I now recollect to have seen growing in its streets, was cut down by a street overseer, who chanced to have occasion for brush in filling up a ravine. It was a fine tree, and not a few felt hurt and indignant at its destruction; but the road-master saw no value in it, except as he could make its branches useful in preventing the washing out of earth from the street.

In the towns which, though injured, are not yet so badly defaced—and there are many such—it is to be hoped that a different policy will prevail. Proprietors ought to guard their trees with far more vigilance than they would their money, because they are far less quickly replaced. Town authorities ought sedulously to protect avenue

trees, not only as a means of rendering their place pleasant to its inhabitants, but also because the beauty of the town is a part of its wealth, and has an extensive influence in attracting capital and valuable citizens to it. If he who plants trees is a public benefactor, how much more so is he who preserves those already grown, and which, for a long time, will be far more valuable than any which he might plant.

It is to be hoped that this subject will attract more attention at the West than it has hitherto received, and that our new towns, while so rapidly attaining strength, will preserve, in some degree, that comeliness which nature designed for them.

THE APPLE ORCHARDS

BY L. DURAND, DEERBY, CT.

MUCH of late years has been written and said about apple orchards and their cultivation. On most all farms of any extent in the Eastern or Northern States there are more or less of old apple orchards. These, for the most part, have been left to grow up and take care of themselves, which, in the long run, amounts to just no care at all. The consequence has been, that they have become, by this neglect, unthrifty, scrubby trees, full of dead limbs, the trunk and limbs covered with moss and rough bark, presenting an unsightly appearance; and in eight or ten years, the farmer, in early spring, would mount the trees, axe in hand, and cut and slash off large limbs and small, leaving the spurs sticking out from three to six inches long from the trunk, while the tree would be so much relieved from wood that it would take it ten years to get back to where it was at the time of pruning—so that, in the long run, we think that the “let alone system” much preferable to the ten years’ trimming plan, although both plans are what every good reasonable farmer should be ashamed of.

Now what these old orchards want, is, a thorough renovation in the shortest possible time. The first thing to be done, is, to cut off the old top of the growing trees and set on a new one by grafting. This can be done best by the common mode of “cleft grafting.” Those limbs that are the size of a “hoe-handle,” or an inch and a half in diameter, should be selected, as they soon heal over, making the limb sound. The “grafter” should commence in the top of the tree to saw off limbs, and so work down, taking care to graft every tier of under limbs at a longer distance from the trunk, so that the grafts will have plenty of room to grow and not interfere with each other. To have this work done in a business-like manner requires three hands—one to saw off the limbs and pare the stocks; another to set the scions, two in a stock; and the third hand to put on the wax. All old trees that have a good sound trunk, however many dead limbs they may have, should be sawed and grafted. But many old trees require different management. Some, by bad pruning, have grown their old tops up very high. To graft these old tops at such a distance up, would be a difficult job; at the same time they would make an unsightly appearance in growing. Such trees should be “headed down”—that is, the large limbs sawed off at such

distance down the tree, that when the new shoots put out they may form a handsome top. These sprouts, if they are of thrifty growth, may be grafted the second season, or "budded," as the case may be. Old large trees of slow growth should not, in all cases, have their whole top taken off at once, as the shock might kill them. But in these cases the south half of the tree might be taken off first; then, say in two years after, the north half could be treated in the same way, and the tree saved. As to the time of pruning apple trees, it may be done any time from May to October; but it should be done regular every year, and then only small limbs will be taken off; but in the case of old, neglected orchards, more or less of large limbs must be removed. About all the tools wanted are a sharp hand-saw, a fine pruning-saw, and pruning-knife. It will be well to have the large wounds covered by a composition of gum shellac, dissolved in alcohol to the consistency of paint, and put on with a brush. This, I think, is as cheap and as good composition as can be had for closing the pores of the wood—also protecting it from the weather. The best grafting wax I have ever used is that made of four parts of rosin, two of bees wax, and one of tallow, melted together, and kept in an iron kettle. In an ordinary sunny day the kettle, standing in the sun, will gather sufficient heat to keep the wax in good working order. This wax will not melt in the hottest weather; neither will it crack and come off in the coldest weather; but it will remain on the stock two or three years, or until it is entirely healed over. Another thing which should be done at the time of pruning is, the trees should be scraped entirely of moss and rough bark, by a "tree scraper." This can be done best directly after a heavy storm, as the bark and moss then will be in the right condition to come off. After this cleaning, a wash, made from wood ash lye, or potash water, should be put on the trunks and large limbs, which will kill all insects and larvæ, giving to the bark a smooth appearance. The "scrapers" may be had at any of the implement stores at a cheap rate.

If I were to advise whether to plant a new orchard or renovate an old one, I should say, renovate the old one first, by all means; because your labor can be made to pay a great deal quicker on the old orchard than on the new. In from three to four years' time your newly grafted trees will begin to bear, and so continue to increase from year to year, while at the same time you have made a handsome improvement on the stock of your orchard. Old orchards that are kept permanently in grass should have the soil dug up around the trees every season; and if done as far as the branches extend, it will be all the better. Manure should be dug into the soil occasionally, as the case requires. Where orchards are near the "pigery" it is a good plan to let the swine have the run of the orchard through the warm season, as they will eat and destroy most of the "windfalls" under the trees, and also keep the soil stirred up in search of worms, &c. Much is being done, at present, by farmers and cultivators, in setting out young orchards. This is a commendable work, and shows that the right spirit is at work among our farmers. The setting out of a young orchard, and then letting the trees take care of themselves, is a "loose business," which too many cultivators still follow to their own loss.

The soil in an orchard should be kept under c

whole time, until

the trees shade the ground so much that it will not be profitable for hoed crops or grain. As to the distance apart the trees should stand, it will depend something on the trees planted. My observation tells me that, as a general thing, apple orchards are set too close on the ground. The trees should be set at such distance apart that the trunks will grow to at least eighteen inches in diameter before the branches approach each other. Some six or seven years ago I set out a young orchard of *Baldwins* at a distance of forty feet one way by thirty the other, and when the trunks reach the size of a foot and a half, I think that the ground will be nearly covered. An orchard of *Rhode Island Greenings* should be set at least forty feet each way, as this tree opens more like the umbrella in shape; the branches extending out horizontally from the trunk, it covers a large surface. There is nothing to be gained by crowding trees so that the branches will come together when the trees are eight or ten inches in diameter at the trunk; but much is lost in this way. The trees should have room to extend their branches, should the orchard live and thrive for an age or century to come. The quality of fruit is much better, also, when the trees have plenty of room and sun-light to mature the fruit.

One word as to the over-supply of good fruit for market, which some cultivators seem to apprehend from the great attention given to this business. I have no idea that the supply will equal or exceed the demand for good fruit in this country in the next fifty years to come. Of course, prices will vary according to the amount of fruit grown in a season, and other circumstances connected with the business; but good fruit of all kinds will always bring a remunerating price to the careful and patient cultivator; and then we look for the cultivation of hardy kinds of apples for the "foreign trade," to become a business hereafter of which we know but little at present. Something has been done in this way already; but that a great deal more will be done in the next half century, and that, too, at a large profit, we have no reason to doubt at present. Farmers and cultivators will continue to make all the improvements they can, both in their apple and other fruit orchards.

NOTES ON STRAWBERRIES FOR 1853.

BY R. G. PARDEE, GENEVA, N. Y.

Crescent Seedling.—This new variety from New Orleans has, in my garden—this its first season of bearing north—proved a perfect failure. The plants are very strong and vigorous; the blossoms large and distinctly staminate; the berry of rather light color, nearly round, of rich, high flavor when ripe, but a moderate bearer, and no appearance, thus far this season, of prolonging the season of strawberries north, as it has ceased bearing.

McAvoy's Superior.—We had large expectations of this new variety, and have not been disappointed. It has this season been superior to any of the fifty varieties in bearing on my grounds, and besides, I have seen it in bearing in several other gardens

on Long Island, Newburgh, and in this vicinity; and in all places where I have seen it, it has, as far as one season's trial can do it, proved number one in size, flavor, and productiveness. Some question has arisen about its being of sufficiently high flavor to meet its reputation, and the taste of imperfectly ripened specimens at several exhibitions has given some reason for this objection; yet, after repeated and careful examinations of it in various gardens and locations, in company with some whose taste is intelligent, we think it of high, rich flavor, and expect it will prove an acquisition.

McAvoy's Extra Red appears to be fully equal to *McAvoy's Superior* in every particular except flavor, and is superior to it for a market fruit, having borne twenty miles land carriage, and forty-eight hours exposure to hot weather after gathering, without losing its fine color or form.

Longworth's Prolific.—Most of the Cincinnati nurserymen have sent out spurious plants for this new variety, and thus greatly chagrined multitudes in this country; but I have seen the *genuine* in bearing in three or four counties in our State, and in most cases it has handsomely sustained its high reputation. From my observation of it this season, I conclude it gives promise of being one of the best, if not the best staminate that has come under my observation.

Walker's Seedling has borne handsomely. Fruit good size; very handsome form and color, and rich flavor. It promises to be an acquisition to our staminate.

Moyamensing Pine has rather exceeded my expectations for a market fruit. It has borne well, and fair to large size; very bright color, and, like *McAvoy's Extra Red*, retains its color and good appearance a long time. The flavor is satisfactory as a market fruit, although not of the grade called high flavor.

Monroe Scarlet has again sustained its high reputation as a remarkably profuse bearer, fine size and flavor.

Genesee Seedling is growing in favor. It is a very handsome fruit, good flavor, vigorous, and usually a fine bearer for a staminate.

Burr's New Pine has also sustained its reputation for good crops, and richest, most agreeable flavor of all strawberries.

Hovey's Seedling has done nobly in various locations. My old bed, now five years old, continues to bear well, and always, since first year's failure, produces me large, fine fruit, with the largest single specimens of berries, although some few kinds excel it in the average size and productiveness. There is no fear, I opine, that *Hovey's Seedling* will ever be discarded by an intelligent amateur—and yet, it has nearly failed its crops this season in several fine gardens in this vicinity under very rich cultivation, while, on the contrary, I noticed in Col. STODDARD'S grounds at Palmyra, a remarkably fine crop on a spot of old sterile pasture ground, that last year would scarcely bear corn, without trenching, manuring, and watering. Several other similar observations during this and the preceding years, confirm my opinion that *Hovey's Seedling*, as well as most other American strawberries, will bear the best crops in soils only moderately rich.

Black Prince produces its usual tolerably fair crops of handsome fruit.

Princess Alice Maud is moderately growing in favor; is early, handsome, and a fair bearer.

Large White Bicton Pine bears better crops of rich, handsome fruit, than we expected.

Cornucopia has done much better this year than last. I shall try it further with care.

British Queen has borne but a small crop of fine fruit under the most careful cultivation of a skillful English gardener in Geneva. At Dr. HULL's it did decidedly better.

My other varieties have not varied essentially from notes on them in August number of the *Horticulturist* for 1852. I have seen, during the season, numerous seedlings of others, and raised some myself, but, as yet, am unwilling to take the responsibility of introducing any of them to the public without further trial. My next experiments are for seedlings of *McAvoy's Superior*, *Large White Bicton Pine*, and *Walker's Seedling*; but, of course, the result is very doubtful.

ERRATA.—In my communication in the last number of the *Horticulturist*, when speaking of the blossom-buds of the *British Queen*, bearing on Dr. HULL's grounds, you make me say a *quarter* of them bore: my notes said, or should of said, the *greater* part of the blossom-buds perfected fruit.

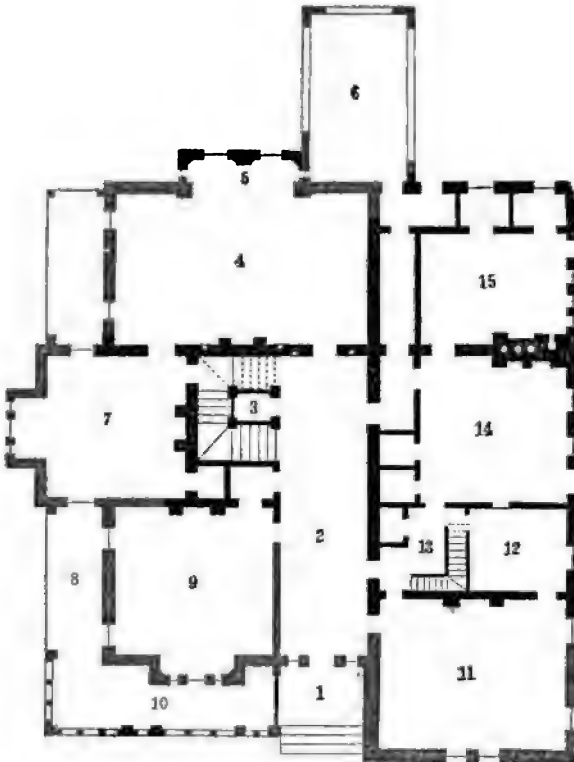
R. G. P.

DESIGN FOR AN ITALIAN VILLA.

BY GERVASE WHEELER, ARCHITECT, NEW YORK.

THIS design of a villa suited to the accommodation of a family of liberal mode of living, has been recently erected at Norwich, Conn. Its situation is eminently adapted for the display of architectural beauty, and on account of the commanding prospect enjoyed from the upper windows in the tower, amply justifies the introduction of such a feature in the composition. Its material is brick, dressed with Portland stone; the roofs are of tin, and the verandas, &c., of wood. The distribution of the rooms may be understood by an examination of the plans, which provide accommodations on a most liberal scale.

The principal floor comprises an entrance porch (No. 1), which leads by means of wide doors into the hall (2) of spacious dimensions, in which is contained the principal stairway (3). At the end of the hall is a handsome doorway, with niches on either side, opening into the drawing-room (4), which possesses a charming feature in the shape of a large bay (5), a side-window, which opens into the conservatory (6). No. 7 is the library, a well proportioned room, having a projecting reading-window, with also French windows leading on either side into verandas, marked on plan No. 8. The library, it will be seen, contains a large closet. No. 9 is the family parlor, with windows on one side opening to the veranda, and with a projecting window looking upon a terrace (10). This room conducts, by means of a private lobby, into the entrance hall and stairway, so as to afford a retreat for the ladies, if surprised by



PRINCIPAL FLOOR.

too matutinal a visitation. The dining-room (11) is a large and handsome room on the opposite side of the entrance hall, having connected with it a spacious and well lighted butler's pantry, complete with every convenience (12), and also an inner hall (13) leading to the kitchens, and containing various closets, and the back and cellar staircases.

The kitchen and domestic arrangements are as follows: No. 14 is a large and well lighted kitchen, well supplied with closets, and having a separated lobby that permits access to the hall and main body of the house, and yet entirely shuts off the domestic office from exposure. This lobby terminates in a covered way near

the conservatory, which gives access to the usual adjuncts of the building, which space would not permit to be shown upon the plan. No. 15 is a laundry, or back kitchen, containing a large larder and store closet. Beneath the whole house is ample cellarage, seven feet high in the clear, and well lighted and ventilated, and in the very center of the building is a sub-cellar, some six or seven feet deeper, containing the heating apparatus—one of CHILSON'S largest sized furnaces—a position which prevents the loss of heat by pressure upon a long length of horizontal pipe, and secures the easy ascent of the warmed air into the rooms, and its ready and natural distribution by proper ducts throughout the house.

The chamber floor is thus apportioned: No. 1 is a large, well lighted corridor, leading from the principal stairway, and conducting by an open lobby (2) to a chamber (3) over the library. No. 4 is a chamber of the same size as the parlor beneath, and 5 a smaller single room, or it may be a dressing-room. No. 6 is a large room, the same size as dining-room. 7, the back staircase. 8 is a dressing-room, or single chamber. 9, a large sleeping-room, amply supplied with closets, and reached from the landing, 7. 12 is a hall leading to water-closet (11) and bathing-room (10); the tub in which occupies very little room, placed as the plan represents.

It will be seen that the portions of the building containing drawing-room, laundry, &c., only extend one story; the house could, therefore, at any future time, be thus much increased in size, and light to the hall and staircase elsewhere obtained.

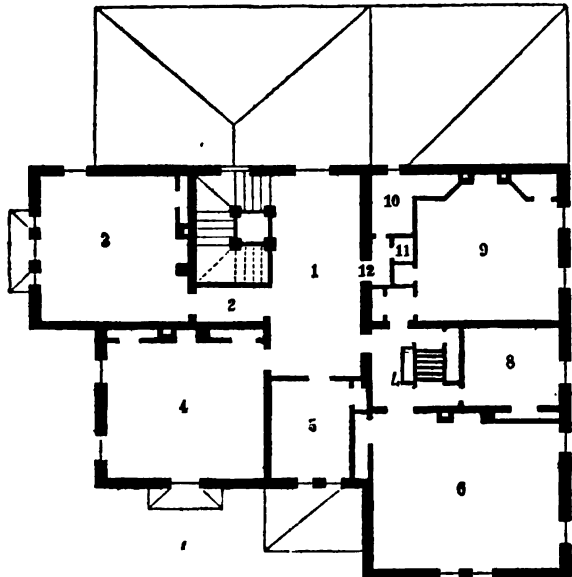
The attic floor contains abundant accommodation for servants, and a large room over No. 6 suitable, from its airy position, as a nursery, or spare room. There is also a handsome room in the upper story of the tower, which is reached by a staircase placed in the corridor

on the attic floor. All the apartments throughout the house are of large size, and the height of the stories are in proportion.

The external appearance of the building is very effective—the breaking up of the parts that the plan permits giving an opportunity for picturesque treatment of its outlines. The character of the work is bold, and the general effect of the mass harmonizes very well with the surrounding scenery.

The cost of the building, with its adjuncts, has not exceeded twelve thousand dollars, and it is well built and finished throughout.

There are many minutiae of convenience that the smallness of the scale does not permit me to show in the plans, but as a type of the American Suburban Villa, I think the design will bear inspection, and the arrangements of the building a close and critical examination.



SECOND FLOOR.



Foreign Notices.

EXHIBITION OF KITCHEN GARDEN PRODUCTS IN ENGLAND.—The first show of the season under the new arrangement was held on the 24th of May, and, strange to say, there were but two competitors. The *Gardeners' Chronicle* reports :

"Of collections of vegetables, which were especially invited on this occasion, two were produced—one by Mr. BURNS, gr. to Earl STANHOPE, at Chevening, the other by Mr. SPIVEY, gr. to J. A. HOUBLON, Esq., of Hallingbury, near Bishop's Stortford. Fifty-six varieties came from Chevening, and only ten from Hallingbury. Some of Mr. SPIVEY's produce, as his Broccoli and Leeks, for instance, were, however, better than Mr. BURNS'; but then he fell far short of Mr. B. in point of a large and finely varied collection, which is what the Society was desirous of encouraging, in order that it may show what a garden skillfully managed is really capable of furnishing at different seasons of the year; the first prize was therefore awarded to Mr. BURNS, and the second to Mr. SPIVEY. Mr. BURNS sent Wilcove and Miller's dwarf Broccoli, Fulmer's dwarf Kidney Bean, Horse-radish, Celeriac, a vegetable used in soups, but not now very often seen; Seakale, Jerusalem Artichokes, Asparagus, Red Beet, Cattell's Reliance Cabbage, young silver-skinned and Strasburg Onions, old Potatoes, London Leeks, Mushrooms, both large and in the button state, Jerusalem Kale, Victoria, Giant, Linnæus, and another kind of Rhubarb; white and red Turnip Radishes, and a salmon-colored variety, apparently a good long kind; Walker's white-spined Cucumber, curled and Normandy Cress, Mustard, Chicory, Celery, knotted Marjoram; common and Lemon Thyme, hardy green, white, and Bath Cos Lettuces; Sweet Basil, Fennel, red, common, and variegated Sage; Tarragon, summer and winter Savory, Batavian Endive, Chervil, fine double and giant Parsley, Sorrel, Watercresses, Burnet, round and prickly Spinach, and Italian Corn Salad, which, as we have before stated, is much better than the common sort.

"Mr. SPIVEY produced new Potatoes, young Carrots, Broccoli past its best, but large and fine; Cabbages, Spinach, some very good Leeks, Asparagus, Seakale considerably past its best, Myatt's Victoria Rhubarb, and Mushrooms. Of foreign produce, Mr. LEWIS SOLOMON, of Covent Garden, sent a salad consisting of very good Curled Endive, Paris Cos Lettuces as large and fine as they could possibly be produced about London at any season, and red Turnip Radishes. A Banksian Medal was awarded. It may be mentioned here, that the Garden of the Society also contributed a collection of vegetables, consisting of round Summer Spinach, and the following Cabbages: Wheeler's Nonpareil, Early Plaw, Tiley's Early Marrow, the best very early kind, being sweet and tender, with no waste; Early Battersea, *alias* Fulham or Vanack, the best for a general crop; London Market, a large sort, but a little coarse; Sutton's Early Coomb, Early Nonpareil, and Brown's early. The same establishment likewise furnished Linnæus, Victoria, Prince Albert, and Prince of Wales Rhubarb, the latter a short, deep red sort; Cock's Hardy White Cos Lettuce, Victory of Bath and Galway's Victory Cucumbers, and the Virginian Poke (*Phytolacca decandra*), a plant indigenous to the United States. The leaves of the latter are unwholesome; but the young shoots, which lose this quality by boiling in water, are eaten in North America as Asparagus. These shoots, which make their appearance very early in spring, are cut when about six or eight inches long; they are then scalded with boiling water, and afterwards boiled for twenty minutes in water, with a little salt in it; they are then placed on a suitable dish, with a small portion of butter added, when they are ready for table. Dressed in this manner, it is considered in America quite as good and delicate as Asparagus.

"Of plants, Messrs. LUCOMBE, PRINCE & Co. received a large Silver Medal for a very fine variety of *Cattleya Mossia*, having more orange in the lip than common, and for a collection of new

hybrid Cape Heaths, consisting of *Lindleyana*, *Exoniensis*, *pulcherrima*, *insignis*, *exquisita*, and *metulæflora superba*; all fine kinds, possessing large bold flowers and bright clear colors; they were stated to have been raised from *Massoni*, *ampullacea*, *Sprengeli*, *Hartnelli*, and *aristata*, all, it will be seen, good parents. The same nurserymen also sent *Andromeda formosa*, a charming new white-blossomed evergreen shrub, from Nepal, which has been found to be hardy at Exeter, and which certainly well deserved the Banksian Medal which was awarded it, and along with it the brilliant *Begonia Prestonensis*, grown in a green-house; *Acacia hispidissima*, a new kind, with large bright yellow flowers, and apparently sufficiently shrubby to be suitable for pot culture; *Viburnum plicatum*, a very fine *Guedres* Rose, sent out some time ago by the Horticultural Society, and a *Calceolaria* called *Ajax* (yellow with brown blotch), which, having a stiff good habit and multitudes of showy blossoms, will doubtless make a good bedding plant. Messrs. HENDERSON sent a little shrub (called a *Pultenaea*), from Swan river; and Mr. Glendinning had a New Holland plant called *Dianella cærulea*, for which a certificate was awarded. It produces a great tuft of grass-like leaves, from among which issue tall flower-stems, terminating in fine panicles of blue blossoms. Owing to the absence of sunlight, however, they did not open, and therefore the whole beauty of the plant was lost. Mr. BURNS, of Chevening, sent half-a-dozen White Ischia Figs. The plants from the Society's Garden, consisted of three Cape Heaths; *Coleonema pulcherrimum*, two *Azaleas*, *Boronia microphylla*, *Eutaxia myrtifolia*, an Everlasting, *Medinilla magnifica*, two species of *Begonia*, and the handsome *Æsclynanthus speciosus*."

PYRAMID PRUNING.—I never see anything like proper pyramid pruning in this country. Having given attention to the mode pursued by our brother gardeners in France, permit me to give critically the mode so followed; that those who like to have trees of that character may, by time and attention, easily supply themselves with them in this country. The process consists in shortening the first year's shoot of the Apple or Pear tree, called the graft shoot, to one foot at a full bud. The first year, on pushing out in spring, rub off all laterals except four or five at the bottom of the stem, to garnish it with a first tier of branches for future years. Train the leader to a stick quite perpendicular. The next winter proceed as before, by shortening the leader to twelve inches at a full bud. Remove all intermediate buds as before down the leader, and leave those at the bottom to form a second tier of laterals; and shorten the lower tier to an outside bud. After the second year shoot, the summer pruning consists in rubbing off the laterals, forming now the lower tier, above and below the branch, so as to keep them as horizontal as possible. Strengthen those which grow horizontal, by pinching off the ends if necessary. Each tier should be, as near as may be, twelve or thirteen inches, one above the other; and if possible, the branches of each succeeding tier should be so grown as to be above the intervals of the tier below. Thus, as we see in France, this training makes a beautiful symmetric tree; which, without blousing the borders, may, when planted at distances of twenty or more feet, adorn the flower beds of a geometric garden, with presenting to the eye of taste the offerings of Flora and Pomona at one and the same time.—*Wm. Mason, in London Gardeners' Chronicle.*

HOW TO DRIVE AWAY MOLES.—Take 1 lb. of bean-meal, 8 oz. of slaked lime in powder, $\frac{1}{4}$ oz. of powdered verdigris, and 4 oz. of essential oil of Lavender. After mixing thoroughly the powdery part of this composition, incorporate the oil. With a little water work the mixture into a dough. With this form balls the size of hazel nuts; they will harden after having been exposed to the air for twenty-four hours. Introduce them twenty or thirty feet apart into the mole's runs, or one ball may be dropped into the hole of each mole-hill, taking care to cover it up immediately. The smell of these ingredients is so offensive to the mole, that he immediately deserts his ground. The mixture is, at the same time, a violent poison for moles, rats, and all such vermin.—*Flore des Serres.*

Editor's Table.

MR. HOVEY ON ROOT-GRAFTING.—In the course of some observations on Root-Grafting, in the May number of this journal, we asked Mr. HOVEY to explain the superiority of budded, or stock-grafted over root-grafted trees; in reply to which he says:

"Our theory therefore is, that a great many varieties of apples, as well as other fruits, are so different in habit from the original species, that they do not grow freely on their own roots, and that root-grafting, from not imparting a rapid growth to the young scion, induces a weakness in the young tree, from which it will not quickly recover; just as a tree, grown on poor and stunted soil, makes its first sap-vessels so small and contracted, that no after treatment will enable it to acquire a vigorous condition."

Now it will be recollected that we stated expressly, that root-grafting was not applicable to slender growing sorts, and we quoted examples; but Mr. H. quotes the *Rhode Island Greening* and *Roxbury Russet* as slow growing trees, that do not succeed root-grafted. This is not true in Western New York, whatever it may be in Boston. Both of these are strong growing trees, though inclined to be crooked, and they bear root-grafting as well as any others, not excepting the *Baldwin*.

In another place, Mr. HOVEY says that the orchards of Western New York, which he spoke of as being so fine, were "set out years before root-grafting was ever practiced." This is an error. We defy any man to find an extensive orchard of Apple trees, old or young, in Western New York, that are *not* root-grafted. This can be proven, not only by the oldest living authorities, but by the trees themselves.

It is quite a waste of time to make assertions in the face of downright and well known facts. But Mr. HOVEY and we are not agreed as to what root-grafting is; we supposed there could be no difference of opinion on this simple point. If grafting on roots is not root-grafting, we do not know what is. Mr. HOVEY says:

"Root-grafting, by taking the whole of the root, is nothing more than *stock-grafting* at the surface of the ground, and Mr. B. don't certainly intend to call it by any other name. What is meant and what is practiced by everybody, is to take a root of a seedling and cut it into pieces, four or six inches long, which are then whip-grafted; or pieces of roots of old trees are just as good. It is done to save time and expense. To take up a whole root, and then graft it, and set it out again, would be the most expensive way of getting a tree, for nothing would be gained and much lost, as there would be the cost of resetting, and the loss of time in reestablishing the plant."

It utterly surprises us that a man of Mr. HOVEY's experience should write in such a manner. Root-grafting, by taking the *whole* root, is *stock-grafting*, indeed; and then to say that "Mr. B. don't intend to call it by any other name!" A pretty good joke for Mr. HOVEY. But this is not more laughable than his notions of economy.

Suppose, for instance, that a nurseryman has in the seed-bed 1000 Apple seedlings fit for working. If he root-grafts them, he takes them up in the fall, puts them in the cellar, and

in winter, when he has little to do, he grafts them; it is just a day's work to do that. In spring he plants them out, and then all the labor is over, except keeping the ground clean, and removing suckers occasionally for the first season. But suppose he buds, or "stock-grafts" them; the stocks have to be taken up, then pruned, planted out, and kept clear all summer. If the season be very favorable, and the stocks at least two years old, they may work the same season they are set out; but the chances are very frequently against them. Then they must be budded, and budding a thousand is quite equal to grafting; we would rather do the latter, for our own part; besides, the stocks must be looked over and dressed before budding. Then, again, budding is much less certain than grafting; very few are fortunate enough not to be under the necessity of budding a large number the second time, and, withal, to have failures. Then, again, the ties must be taken off; the stocks headed down; and, during the first season's growth of the young bud, three or four crops of shoots have to be removed from the stocks below the bud. When the bud has completed its first season's growth, the grafts have grown two years, and the labor required from that time until they are ready for market, will be just the same.

Now, is it not perfectly plain to every man that the buds, up to the end of the first year's growth, have required, at least, four times the amount of manual labor, and consequently expense. We are not guessing at these things, but arguing upon the strength of actual practice during many years, and upon a pretty extensive scale, where all the cost has been carefully counted and compared. But this question of cost is merely incidental, and should have no weight in determining the merits or demerits of either mode of propagation, for a vicious system should not be countenanced on the ground of its economy. A poor tree should never be purchased at any price; our efforts always have been, and shall continue to be, exerted in favor of elevating, rather than lowering, the standard of excellence in trees. The superior taste and intelligence of the present day demands and warrants better systems of culture on the part of tree growers, than have heretofore been generally put in practice.

Mr. HOVEY very generously gives the following "particular case" to prop up his tottering arguments:

"We will mention one particular case. We had some *Malon* Apple trees of Messrs. ELLWANGER & BARRY, in the spring of 1849 or '50. When we received them, we cut off a few scions. The trees were set out carefully, in a good situation, and the scions were grafted into stocks, set in the nursery rows one year. The latter are now more than *twice as large* as the former, with the promise of being *ten times as large* in two years more."

Now the candid reader will at once say that a single case of this kind amounts to nothing. Would it afford any argument against budding, if we should say that in our grounds there are several stunted, withering specimens, from Messrs. HOVEY & Co., that in seven years have not grown as much as some trees of our own working have done in two? We would be ashamed to use such an accident as an argument.

The growth of root-grafted trees in this part of the country, is such as to challenge the growth of budded trees in any part of the world. If that be any argument in favor of root-grafting, we claim the benefit of it. But this is not the real point of the discussion. Mr. HOVEY says, coolly, that his stock-grafted trees of three years growth, we suppose, are twice as large as the root-grafted trees from ELLWANGER & BARRY of five years, and "in two years more they will be *ten times as large*"—that is, supposing the five years old root-grafts to be six feet high, and two inches in diameter of trunk, his stock-grafts of three

allowing the root-grafts to grow *none*, the stock-grafts will be some sixty feet high, with diameter in proportion. Prodigious! These trees should be in BARNUM'S Museum, or the Crystal Palace.

It is idle to follow Mr. HOVEY further, while he deals in such loose, extravagant statements. We will close this subject, for the present, by quoting from the "*Prairie Farmer*" the experience of EDSON HARKNESS, Esq., one of the most extensive Apple tree growers in the west:

"I have about eight hundred to one thousand grafted and budded trees which have come to bearing. Not much difference as to the number of those budded and those which are grafted. Now, instead of finding a great difference in their hardihood, early bearing, &c., I would not give five dollars to have them all changed to budded trees; or, rather, I do not think they would have been any better lot of trees, had they all, at the proper time, been budded on seedling stocks, instead of having been root-grafted. I do not dispute the facts stated by the advocates of exclusive budding, but believe that the inferences they draw from those facts are altogether wrong. There are certain varieties of the Apple, which, planted on a rich soil, are very slow in coming to a bearing state. Take the *Yellow Bellflower*, for instance; it will take ten to fourteen years to come into a bearing condition, and in that time it would spread out into an enormous tree, whether it be root-grafted or placed upon a seedling stock, of the same or greater vigor than itself. But place this same *Bellflower* upon a rigid, slow growing seedling stock, and it will produce an exceedingly large crop three to six years sooner. And so it is with all the vigorous fast growing varieties; they are slow in coming to a bearing condition, unless dwarfed on a crabbed seedling, which checks their vigor, and causes them to throw out fruit buds. These dwarfed trees, however, are not so valuable as those which grow without any check, and become large before bearing. I have sixteen *Michael Henry Pippins* which are on rather rigid stocks, which have, up to this time, produced an average of fourteen bushels of apples in three bearing seasons. I have also two others on very strong stocks which have not produced more than from six to seven bushels each. But it is probable that the two large trees will, in the course of twenty years, produce twice as much as any two of the others."

THE NEW ROSES.—*Fortune's Double Yellow* is a dull buff, with a tinge of purple; flowers small, semi-double, and loose; about as hardy as a Tea Rose—at the best, it falls far below expectation. We see the *Philadelphiu Florist* has republished VAN HOUTTE's plate from the *Flora des Serres*. During the past season, its reputation has somewhat recovered by a more skillful and successful culture. The flowers are produced on wood of the previous year's growth, and therefore the shoots, instead of being cut back, must be preserved and merely thinned out, as is done with the *Persian Yellow*, *Banksias*, and others of similar habits of flowering.

The *Augusta*, originated from seed by the Hon. JAMES MATHEWS, of Coshocton, Ohio, and sent out last spring by Messrs. THORP, SMITH, HANCOCK & Co., of Syracuse, has flowered finely in our own grounds. It is in habit similar to *Solfatara*; the flowers a pale yellow, rather deeper than *Solfatara*, and more fragrant; the center petals are small, which very much lessens the fullness and perfection of the flower; it grows and blooms freely, and is altogether a desirable variety, but will not prove to be, as some seem to expect, a "*hardy climbing yellow Rose*." It belongs to the same class as *Chromatella*, *Solfatara*, and *Lamarque*, and will prove to be about as hardy as these.

Paul's Victoria, announced some two years ago as a superb "*White La ...*" proves to be a large and very beautiful Rose of a pale flesh color, with a rosy tint center,

resembling *Souvenir de la Malmaison*; this is as near as it comes to *white*. The habit is vigorous; foliage large and luxuriant; the best, no doubt, of its color.

Caroline de Sausal resembles the preceding very much, and is nearly as good.

Robert Burns, described as "a climbing perpetual," has nothing remarkable in color, being a bright carmine, with a shade of purple; a vigorous grower; will make a fine pillar Rose.

Coup de Hébé and *Charles Duval* are two first-rate Hybrid Bourbon Roses; both of a deep pink; large and full, like *La Reine*; both are successful show varieties.

Paul Ricant, another of the same class of a brilliant crimson, coming nearly up in color to *Geant des Batailles*.

Madam Lamoriciere—fleshy pink, and of the most perfect form.

Baron Hullez—rosy crimson.

Madam Trudeaux—light crimson.

Madam Fremion—rosy carmine.

The three last approach one another in color, and all are fine.

Madam Pepin, *Gen. Negrier*, and *Sydonie*, are charming varieties of a rosy blush, very delicate, and very sweet. The seven last named are Remontant, or "Hybrid Perpetual."

FEAST'S KING OF THE PRAIRIE ROSE.—Mr. FEAST writes us that he has at length succeeded in obtaining a variety of the *Prairie* Rose, as fragrant as the old *Damask* Rose, larger than the *Queen*, and of a bright peach color. This must be an acquisition, as admirers of this useful family of Roses have always regretted the absence of fragrance. Not long ago we sent some *Prairie* Roses to a very well known literary gentleman on the Hudson, and he wrote us back he did not want them, as he would not have a Rose without fragrance on his grounds. Mr. FEAST sends us the following description of the "*King*."

"This is the third season of flowering. Sweet-scented, like the old *Damask* Rose. The form is cup-shape. Color bright peach, and darker toward the center. This is before it is fully open. The bud is long-conical in shape, and very pretty—together with the first opening of the flower it makes a beautiful appearance. As it opens it shows two or three small petals of a lighter color than the outer ones; these being slightly curved back, gives to the Rose a globular shape until fully expanded. There is a delicacy in the shading of the petals I have not seen in any of the tribe. The size of the flower when fully expanded, is much larger than the *Queen*. The clusters are large—from twenty to twenty-six in one head. Each flower has twenty-five perfect petals, with smaller ones in the center. The petals are thick and fleshy. The habit of the plant is strong, and a free grower. Foliage large and dark green. Perfectly hardy. Flowers ten days before the *Queen*."

RASPBERRIES.—The experience of the present season convinces us that the *Red Antwerp*, so extensively grown for market in Orange county, N. Y., is different from the true *Red Antwerp*. It is much more conical, the grains smaller and more compact, giving greater firmness to the berries, and rendering them better adapted to market purposes. The canes of the Orange county variety are more slender and more spiny, and the leaves are not so large or so heavy as those of the true variety. It is cultivated around Toronto, and we have in some cases received it from England. The genuine *Antwerp* is grown here by many Dutch families, who brought it directly from Holland. The *Fastolff* is a superb fruit, the largest we have seen; a strong grower, hardy, and productive. Dr. BRINKLE'S *Orange*, we understand, promises to be valuable for market. If it be so in firmness, its color will make it very popular.

A CHERRY FESTIVAL.—On the 22d of June last Mr. F. R. ELLIOTT, of Cleveland, Ohio, invited his pomological friends to a *Cherry Festival*, on which occasion the famous seedling varieties raised by Dr. J. P. KIRTLAND were to be served up before the critical guests. The holding of a local horticultural exhibition, and some other circumstances, deprived us of the great pleasure of attending, but a private note from one of the guests has given us a lively account of the proceedings. A large number were in attendance, chiefly from the west, and spent two days and one evening, not only in tasting cherries, and discussing their merits, but in various other modes of enjoyment, which had been liberally provided for them. Dr. KENNICOTT has kindly furnished us the following off-hand notes, showing how the affair was conducted, and what the results were:

FRIEND BARRY: We all regretted your absence at the CHERRY FESTIVAL, but your excuse was a sufficient one. We are bound to attend to the affairs of our local societies in preference to distant interests; and yet, as the editor of our *Horticulturist*, you ought to have been excused by your association, for of all others you should have seen and been enabled to give a just and reliable account of the great show of Cherries, to which we were introduced by Professor KIRTLAND and F. R. ELLIOTT.

Your letter to Mr. ELLIOTT was handed to me, and I would gladly comply with his request to act for him in giving you "some account of the matter;" but a week's absence leaves little leisure from needful business and correspondence, and I had to prepare matter for my own paper forthwith, and any thing for yours must go this mail, or reach you too late for "August number."

It is well known to the old readers of the *Horticulturist*, that Dr. KIRTLAND has been long engaged in testing seedling Cherries from the old *Yellow Spanish*, fertilized by *Black Tartarian*, *American Amber*, *May Duke*, and *Arch Duke*, and, possibly, other varieties; though these sorts grew beside the tree of *Yellow Spanish* that furnished the seeds of these KIRTLAND Cherries, (which F. R. ELLIOTT has occasionally described,) and many others, not yet brought into notice on account of the great reluctance of the Doctor to permit a fruit, not fully equal to the best, to get abroad before the produce of years has given repeated testimony in favor of the claims of the new candidate for notice.

The way the Doctor managed with us showed both sensitiveness and confidence. Mr. ELLIOTT took us all up to Rockport before showing us the Cherries of his own planting; and there we found Dr. KIRTLAND, prepared to get a candid opinion from every one, not capable of determining the identity of a variety, when placed along side of others the most nearly resembling it. Some twenty or thirty dishes of Cherries were arranged, designated by numbers alone; and as the variety passed round, we were required to enter the number, and write down our opinions against it; and at the conclusion of this examination, a number was called and we read off our remarks in succession—no one being excused—and then Dr. KIRTLAND announced the name of the Cherry, and gave its history; and though (as we knew) there were some half dozen sorts of the best old Cherries artfully arranged, so as to escape detection if possible, yet, in nearly every instance, the KIRTLAND SEEDLINGS were the ones selected as "best!" And what must have pleased the old Doctor better than this unbiased testimony in favor of his Cherries, we all selected as the best those sorts which are most esteemed by himself and F. R. ELLIOTT.

In my blind notes, *Mammoth* and *Delicate* are set down as the very best; but the majority rated about as follows: Of the reds—*Gov. Wood*, *Delicate*, *Kirtland's Mary*, and *Rockport Bigarreau*; *Belle d'Choisy* being ranked as "best" in one instance only. Of the blacks—*Black Hawk* and *Oseola* were entirely ahead of any of the old blacks. The *Doctor*, and *Logan*, and also *Jockosott*, are down on my list: the "*Doctor*" is a very sweet Cherry, and all the blacks are, in some way, superior; but, unfortunately, very few of them were ripe; and so of some of the reds. And, by the way, there are some forty varieties in all, not one of which but is more worthy of cultivation than a large portion of the old world varieties.

And now, for the great point of worth, and the wonder of all—except my first favorite, the *Mammoth*, which is a poor bearer, and possibly two or three others, not yet before the public—all of these thirty or forty seedlings are the most prolific of Cherries, beating the old sorts out of all comparison, in many instances, and beating them sufficiently in every case. The limbs were literally massed with fruit—and *such* fruit! Oh! you *should* have been there, friend BARRY, for—although you are not in the habit of going off in ecstasies over every new thing—you *are* capable of appreciating excellence, and giving others just and sensible notions of the worthies of the day—among which I am inclined to rank the KIRTLAND Cherries pretty near the head of the list in pomology. I feel grateful to friend ELLIOTT for the chance of seeing (and eating to repletion) these delicious productions of the West, and I assure him—as I now do you—that should his forthcoming book not go beyond THE CHERRIES, even, it can not fail of interesting pomologists, the Union over.

SAVING SEEDS—VITALITY OF SEEDS, &c.—A horticultural friend in Canada writes us a pleasant letter, from which we extract the following hints. They may be useful to some one.

"The early part of my life was passed in wandering about the earth. My boyhood was devoted to the military profession, under the 'Iron Duke,' in Spain and France, and you know the old English observation—'if a lad has no brains, put him into the army.' However, about 1828 I retired on half-pay, domiciled on the banks of the Detroit, and took, by way of passing time, to gardening and fruit-growing, of which I knew about as much as the babe just born. I found it necessary, therefore, to keep a journal and register the results of my blunders as a warning; they do afford me amusement sometimes. I had been for years in the habit of selecting my seed—that is, for instance: I have, during that period, never sown a pea that was the produce of a pod containing less than six or seven in it. By this means I have, as I think, improved them. I reserve the most promising rows for seed the ensuing year, and pick off for eating all pods that seem defective in number from these rows; of course, this would be too much work except for a garden. From carrots, parsnips, &c., when put out for seed, I pinch off all side blossoms, leaving only those on the main stem, abstracting even from these last the side blossoms, and, in my opinion, the seed is very much improved.

The vitality of seed I find of greater duration than is usually supposed; but then, it must be saved with some degree of care. To prevent any mistake, I always label the year in which the seed is gathered. On referring to my book, I observe that I sowed in 1851 double curled Paraleys and Asparagus Beans, the produce of 1845; and on the 24th of May, 1850, yellow turnip Radish of 1839. On the 25th of August, 1851, I sowed black Spanish Radish seed gathered in 1838. On the 30th of the same month these Radishes appeared above ground, and there is this observation in the margin: 'The Radishes of 1838 grew very well.' This season was very dry, but the Radishes were watered." C. E.—*Sandwich, county of Essex, C. W.*

A DESTRUCTIVE INSECT.—We find in all the eastern journals accounts of a caterpillar, or worm, that has rarely before made its appearance. It is much more destructive and difficult to destroy than the common caterpillar. A correspondent of the *Tribune*, writing from Maine, says:

"Fears are entertained that the crop of apples, and other fruit which ripens late in the summer and in the autumn, will be entirely cut off, from the ravages of bugs and caterpillars of an entirely new kind. These caterpillars infest fruit trees, and even forest trees in swarms, feeding upon the leaves, and in some instances almost riddling the trees of the leaves, which must injure them very much, if it does not destroy them. I have inquired of the farmers here about these caterpillars, and no one has ever seen anything of the kind, though perhaps others have. Each caterpillar, unlike those commonly infesting Apple trees, attacks a leaf by himself; and when the tree is struck, they will suddenly drop two or three feet from every part of the tree in thousands, there

hang by lines apparently of their own spinning. These caterpillars are from half an inch to three-quarters of an inch in length, and seem very spiteful in defending their rights: a person can hardly go into an orchard without finding himself becoming nervous from a crawling sensation. There is also a bug attacking the Apple trees, resembling the so-called lightning bug; in some orchards I have found from two to a half dozen of these upon every apple that I examined, and they eat into heart of the apple so as to destroy it."

The *Maine Farmer* says:

"We have just done battling the common caterpillar, in the orchards, and begun to think that the apples had nothing more to do now than to grow and get ripe for our use as soon as they could, when lo! and behold! another little great scourge has come in large numbers in the shape of a slender worm about half an inch long. This little nuisance attaches itself to the leaves, and to the apples, and all about the buds, eating away the soft or pulpy part of the leaves, leaving the hard ribs or woody part. It is somewhat striped, with alternate greenish-white and dark stripes. If you strike or jar the limbs, they will spin down and hang suspended by a fine web. They are doing much mischief. They somewhat resemble the canker worm, but they are not that insect. We have never seen the veritable canker worm, in Maine, but if we recollect right, the canker worm is a 'span worm'—that is, moves by pushing out one end at a time, and then drawing the other end up to it, thereby humping up its body in the shape of a bow; but this fellow goes straight along, at pretty good speed. We do not know how to get clear of it. If shook off, and the webs broken by sweeping a pole or stick through the air, between the worm and the limb, they will be thrown to the ground, but whether they know enough to ascend the tree again, we have not ascertained.

"P. S. Since the above was put in type, we have received a communication from O. S. H., of Limerick, which gives a description of the same worm, infesting the orchards in his neighborhood."

The *Connecticut Valley Farm* says:

"Insects seem to be more numerous and voracious than they ordinarily are; and the fruit may be regarded as yet in doubt. How far the depredations of the worm tribe have gone, can not be ascertained at present. The prospect for fruit is far from being as favorable as it was a month ago. We never have known so large a visitation of 'insects injurious to vegetation' in any former year, with the exception of the rose-bug, which, this year, is wonderfully modest and retiring."

This insect has, we believe, appeared in large numbers in some of the western counties of this State, and destroyed the apple crop. We have seen a very few in our own grounds, but they have done no injury of any consequence. Prof. HARRIS informs us that it is not, as many seem to suppose, a *new* insect—that it is described as "*the palmer worm*" in Dr. DEANE's *New England Farmer*, and an account given of its ravages in Cumberland county, Me., in 1791. We have not this work to refer to.

OUR ENGRAVINGS OF FRUIT, &c.—It has been our intention to give engravings of fruit taken from nature, and not merely copies of old engravings. Taking charge of the *Horticulturist* on the first of January last, we have, of course, been unable to procure specimens of the summer fruits, and therefore could not give that variety which would have been desirable. We are now, however, taking drawings of the different fruits as they ripen, and shall hereafter make this feature of our Journal more interesting. In the September number we shall give a plate of *McAvoy's Superior* strawberry, and in the succeeding number Prof. KIRTLAND's fine seedling cherry, *Governor Wood*.

THE favors of several correspondents, received too late for the present number, will receive attention in our next.

If any of the readers of the *Horticulturist*, or any of their friends, desire to purchase a fine country residence, in which fruit-culture is the principal feature, we refer them to the advertisement of H. W. S. CLEVELAND, Esq., of Burlington, N. J. This gentleman is well known to our readers as one of the most zealous and intelligent amateur horticulturists in the country, and for twelve years past he has been improving and planting his grounds. Very seldom such a place comes into market, and we are sure that at the present time a purchaser will not long be wanting.

A VERY PALPABLE ERROR.—A leading agricultural journal in the course of a recent article on Budding, says: "Several sorts of stocks are used for the Cherry—the *Doucian*, *Mahaleb*, and *Paradise* are the most suitable." It is almost incredible that any man who writes upon horticulture should make such a blunder. The *Doucian* and *Paradise* are stocks for the Apple, and no man since the creation has ever done such a thing as bud Cherries upon them.

Your correspondent, A. D. G., in your April number, by some means was greatly misinformed respecting several of the trees and plants of Florida. He strangely enough informs your readers that "in the latter part of February, and early in March, trees of all kinds put forth fresh leaves," "and the towering *Magnolia (grandiflora)* takes on new adornments of thick, glossy leaves, and large white flowers. Soon the scarlet blossoms of the Pomegranate appear, and the little brown flowers of the long trailing moss." Who, with any pretensions to understand such subjects, could have undertaken to state that the *Magnolia grandiflora* put forth new leaves and blossoms in February or March, or have imagined the Black Walnut (*Juglans nigra*), or the May Hickory, a very common variety of *Carya*, even put on their spring garments before April, it is somewhat difficult to conceive. As to the brown flowers of the long moss (*Tillandsia Usneoides*), whether large or small, the existence of them is here unheard of. That plant is now just about to blossom though I have not yet seen any of the flowers open. The blossoms are very minute, but slightly conspicuous, of a yellowish pea-green, three-petaled, and pleasantly odorous when several of them are collected in a bouquet. The whole plant is quite curious, and in many respects interesting. Seen through a microscope, the dull, gray uniformity of its color gives place to several shades, the most prominent of which is a delicate purple. It is entirely arial, depending solely on the atmosphere for subsistence. The seed vessel bears some resemblance to that of mustard, and to each minute seed is attached an egret of a delicate silken texture, by which it is supported in the air and borne about by the breeze.

Among the uses of this singular vegetable, one of the most common is to form the stuffing of mattresses—though for this purpose it may be regarded as a rather coarse material. It is extensively used, and probably far the greater number of beds in our fashionable hotels are formed of this material. Saddles are frequently stuffed with it. It is eaten freely by cattle and sheep, and probably by some wild animals.

So far is the *Magnolia grandiflora* from flowering in February, or March either, that it is still in blossom while I write (June 8). Other varieties of that splendid genus, particularly the deciduous ones, in many if not most cases, put forth their flowers in April. One of these I have not seen described in any work on botany. The tree seldom becomes very large, though too large to be designated as a shrub. The leaves are large, though less than those of the *Macrophylla*, and in shape resemble the leaves of the aquatic plant called *Sagittaria*. Perhaps it might not improperly be named *Magnolia sagittifolia*. The leaves and flowers appear together, and both seem to wear an appearance of fragility and delicacy. At this time, the cone, if it may be so called, seems to have arrived at nearly its full size, and the whole tree presents an image of

Permit me, before closing this rambling paper, to name to you another production of this section which I have not seen except in this vicinity. It evidently is an Ash, yet unlike any other variety of that tree I have seen or seen described. No specimen that I have seen exceeded fifteen feet in height. Its leaves are trifoliate, and like other species of the genus the plant is dioecious. The seeds are in clusters, something like umbels; and instead of a wing extending in one direction like a spatula, the wing encircles the seed in nearly a circle. When fully clothed with foliage and seed, the trees are very beautiful. I imagine it would form a beautiful shrub for the lawn. Should you find no description and name for it, you may understand me as suggesting either *Fraxinus frutex*, or *Fraxinus cyclocarpa*. Should life and health be spared, I propose to forward you some of the seeds in autumn. A. B. LAWRENCE.—*Laurel Hill, La.*

Answers to Correspondents.

INCLOSED I send you specimens of an insect which has annoyed me exceedingly; also an apple shoot, showing the mode in which it operates. As you will observe, it is a species of beetle, very much resembling the Curculio, yet I think it distinct from the Curculio. I find them principally on my Apple and Pear trees, occasionally on the Plum and Cherry. They appear to seek the base of a young shoot, cutting out a piece to the center, intercepting the flow of the sap, upon which they must subsist, consequently the shoot soon dies. Thus some trees planted this spring are nearly destroyed—every shoot was cut off, and nearly as fast as they put forth.



Will you tell me something of the history of this beetle; in what other form to look for it; and the best mode of getting rid of it? Since first I discovered the depredators—now some three weeks—I have endeavored to visit all newly planted trees daily, and others twice a week. By giving them a sudden jar, the insects fall to the ground, and are easily destroyed. In spite of my endeavors to exterminate the race, I constantly discover fresh innovations of the industrious pests, which I think must carry on their busy performances under cover of the night, while I am quietly sleeping.

Allow me to suggest as an interesting and useful department to horticulturists, that a portion of your pages be devoted to the description and history of the different insects obnoxious to plants, trees, and shrubs, accompanied, when practicable, by suitable illustrative drawings. A. G. HANFORD—*Waukeesa, Wis.*

A very good suggestion, which we shall be happy to comply with as far as possible.

We have made some inquiry of Prof. HARRIS respecting this weevil, and he has kindly given us the following information:

"The weevil sent you from Wisconsin and forwarded to me, is the *Curculio noveboracensis* of FOSTER, now called *Ithycerus noveboracensis*. It is not an uncommon insect in Massachusetts, and I have seen specimens from the State of New York and Ohio. Here it may be obtained by shaking small Oak and Maple trees in the morning, during the month of June; the insects then drop to the ground, without attempting to fly or escape. Nothing further respecting their habits is known to me. We have yet to learn where they lay their eggs, and where they live and undergo their transformations. If they are common, and destructive as reported by your correspondent then may be able to pursue their history through their various stages from the egg to the adult weevil."

How is the name *Syringa* applicable to *Philadelphus*, the former belonging to natural order *Oleaceae*, and the latter belonging to natural order *Saxifragaceae*, the same order to which belongs the family *Deutzia*? A SUBSCRIBER.—*Rochester.*

The *Philadelphus* was formerly called *Syringa* by some old botanists, and it is yet commonly so called without any propriety. The English name of "Pipe tree" was given to both on account of Turkish pipes being made from them, and they were in this way confounded. The *Deutzia* is closely allied to the *Philadelphus*. *Syringa* should only be applied to the Lilace.

Will you please inform me whether there is any good kind of Grape other than the *Isabella* and *Catawba*, that will grow in our cold northern climate? Also, which is the best time to set them out—fall or spring? A READER.—*New Athens, Pa.*

The *Clinton* and *Diana*. Plant early as possible in the spring.

Horticultural Societies.

PENNSYLVANIA HORTICULTURAL SOCIETY.—The twenty-fifth Exhibition of this association will be held on Wednesday, Thursday, and Friday, the 21st, 22d and 23d, of September, in the Philadelphia Museum, corner of Ninth and George streets. A complete premium list, amounting to about \$400 is offered. We select the following items:

PLANTS—from a private collection—in pots not over sixteen inches in diameter:

For the best twenty plants, at least seven of them to be in bloom, from a private collection, a prize of fifteen dollars.

With this prize it is proposed to present a Silver pitcher, of two hundred dollars value, to be raised by private subscription and donated to the Society, and to be held by the owner of the successful collection for one year, and to be yearly competed for—the donors' and victors' names to be engraved on the Pitcher.

Plants from a commercial grower.—For the best twenty plants, at least one-half of them to be in bloom, from commercial growers only, a Silver cup of fifteen dollars.

Competition for premiums before this Society is *free* and open to *all* persons from any section of the United States.

AD INTERIM REPORT June 20, 1853.—The Fruit Committee, in presenting their usual monthly ad interim report, would remind the Society that, at the stated meeting of last month, specimens of two new grapes (one a seedling of the *Black Hamburg*, the other the *Musqué Verdel*), were exhibited by the originator, Mr. J. FISK ALLEN, of Salem, Mass. Wishing to have an opportunity of carefully examining these two varieties, the committee only noticed them cursorily in their regular report for that evening, with a promise of submitting a more detailed pomological description of them in their June ad interim report. The specimens have been winter forced, and being ripe in March, were kept too long after their maturity to be in their greatest perfection.

Allen's Seedling Black Hamburg.—The bunch exhibited was not very large, though it is probable there will be an improvement in this respect. Berry large, black, oval; seed grey; flesh solid, and possessing much of the character of the *Black Hamburg*; quality "very good."

Musqué Verdel.—This is a natural cross between the *Grizzly Frontignan* and the *Verdelhoë*, the wine grape of Madeira. Bunch large, shouldered, loose; berry rather small, about half an inch in diameter, round, pale red; seed light cinnamon color; flavor rich, saccharine, highly perfumed; quality "best," said to be as early as the *Black July* and the *Pitmaston*.

Mr. ALLEN deserves the thanks of Pomologists for having originated two varieties of grapes of such excellence; and being of native origin, they may prove, for out-door culture, better suited to the requirements of our climate than their transatlantic parents.

From H. W. S. CLEVELAND, of Burlington, N. J.—Fine specimens of strawberries without a name. Fruit large; roundish, sometimes ovate; dark red; seed of the same color, set in superficial depressions; calyx reflected; stamens persistent; flesh yellowish-white, saccharine, high flavored; quality "best." The fruit and leaf clearly indicate the variety to be a Hautbois—probably the *Lafayette*. It is to be regretted that this luscious class of strawberries is so little cultivated.

From Mr. STUART.—Beautiful specimens of strawberries—*Hovey's Seedling*, of last year's planting; some nearly four inches in circumference; quality "very good."

From Mr. GERHARD SCHMITZ, of Philadelphia.—Fine specimens of two of his seedling strawberries:

1. The *Pennsylvania*.—This variety is a seedling of the *Moyamensing*, and was exhibited by Mr. SCHMITZ last season for the first time. Fruit large; broadly conical; dark crimson; seed crimson, and when shaded, yellow, set in depressions not very deep, with roundish intervals; flesh red; flavor fine; quality "best;" sexual character pistillate; leaf large, deep green, serratures crenate. The committee award a premium of five dollars to this variety, as the best New American seedling strawberry of superior quality, after two years' trial.

2. *Schmitz's No. 3*.—A seedling of the *Washington*, exhibited now for the first time. Fruit large; roundish ovate, sometimes inclining to conical; light crimson; seed crimson, often yellow, set in rather deep indentations, with intervals somewhat ridged; flesh pale red; flavor pleasant; quality "very good;" sexual character pistillate; leaf large, light green.

From CALER COPE, Esq.—Specimens of four varieties of strawberries:

1. *McAvoy's Superior*.—This variety originated with Mr. McAVOY, of Cincinnati, and was formerly known as his No. 12. In May, 1851, it received a premium of one hundred dollars from the Cincinnati Horticultural Society. Mr. COPE's specimens were of great size and beauty, some of them measuring five and a half inches in circumference. Fruit very large; roundish ovate, occasionally slightly necked; deep brilliant crimson; seed crimson, sometimes yellow, set in indentation not deep, except in the largest specimens, when the intervals are also somewhat ridged; flesh red; flavor exquisitely fine; quality "best;" sexual character pistillate.

2. *McAvoy's No. 1*.—Large; roundish; deep scarlet; light crimson seed; indentations rather deep, intervals not ridged; flesh whitish, partly stained with red; flavor agreeable; quality "good," perhaps "very good;" sexual character pistillate. An abundant bearer.

3. *McAvoy's Extra Red*.—Large; roundish; scarlet; seed red, sometimes yellowish; indentations tolerably deep, intervals somewhat rounded; flesh yellowish, slightly stained; sub-acid flavor; quality only "good;" pistillate; extraordinarily productive.

4. *Longworth's Prolific*.—This fine variety originated with Mr. SCHNEICKE, of Cincinnati, and was formerly known as *Schneicke's Hermaphrodite*. Very large; roundish ovate; brilliant crimson; seed of the same color, sometimes yellowish, set in rather deep indentations with rounded intervals; flesh red; flavor fine; quality "very good." A variety of great excellence; perfect in its sexual organization, and remarkably productive, a rare circumstance with staminate varieties of large size.

From Mr. ROBERT BUNT.—Fine specimens of two varieties of strawberries—*McAvoy's Superior* and *McAvoy's No. 1*; described above.

From Mr. HENRY A. DREER.—A dish of the *Moyamensing* strawberry. This fine variety originated with Mr. GERHARD SCHMITZ of this city, and took the premium offered by the Pennsylvania Horticultural Society for the best seedling strawberry exhibited in 1848. Fruit rather large; roundish-conical; deep crimson; seed crimson, set in rather deep depressions, with rounded intervals; flesh red; flavor very fine; quality "best;" sexual character pistillate; leaf large, with crenate serratures.

From Dr. E. W. CARPENTER, Lancaster.—The *Triumph of Cumberland* cherry, a native of

Cumberland county, Penn. Specimens fine. Large; obtuse heart-shaped, sometimes roundish, compressed at the sides; deep crimson, almost purple when fully ripe; suture indistinct; stem rather long, slender, inserted in a broad, open cavity; apex slightly depressed; stone roundish-oval, compressed; flesh rather solid, red, slightly adherent to the stone; flavor fine; quality "best;" period of maturity about the middle of June.

JUNE EXHIBITION OF THE GENESSEE VALLEY HORTICULTURAL SOCIETY.—REPORT OF THE COMMITTEE ON FLOWERS.—Owing to the exceeding hot and dry weather which was prevailing at the time of, and for ten days prior to, the exhibition, the contributions to this department were not as good as they would have been if the season had been more favorable. Although the contributors had much to contend against, it was one of the finest shows, particularly of Roses, ever held by the Society. Of the amateurs J. A. EASTMAN, Esq., contributed 66 varieties of Roses; A. Frost & Co., among the Nurserymen, 275 varieties of the rose; ELLWANGER & BARRY, 197 sorts; SAMUEL MOULSON, 80 varieties; WM. KING, 132 varieties; J. J. THOMAS, Macedon, 60 varieties.

PREMIUMS AWARDED TO AMATEURS.—*Pansies* in basket, best display, SARAH A. MOULSON, \$3.

Roses—Best collection classed and named, J. A. EASTMAN, Esq., diploma.

Verbenas—12 varieties, in pots, finely trained on horizontal trellises, J. SALTER, gardener to J. W. BISSELL, \$3.

Fuchsias—Best collection correctly named, J. SALTER, gar. to J. W. BISSELL, \$5.

Pelargoniums—7 varieties of seedlings, very fine, and some of them much better than the older sorts, JOSIAH SALTER, gar. to J. W. BISSELL, diploma.

Table bouquets—Best pair, LILLIE GREENOUGH and JULIA MILLER, \$3.

Best Floral Ornament—A large pyramid of very fine flowers, to J. C. McNAB, gar. to JOHN GREIG, Esq., Canandaigua, \$3. Second best to Miss HOOKER, \$2.

Miss SARAH A. MOULSON, a beautiful mound of roses, \$2.

Miss ADAMS exhibited two exquisite moss baskets, filled with roses, which were much admired.

Mr. ROBERT HARDY presented a beautiful basket ornamented with roses.

Two floral ornaments were very creditable to the exhibitor, Miss MCGARRY.

Quite a novelty was placed upon the table by H. G. WARNER, Esq., in the way of an *Amaryllis*, taken from its native soil by Mr. WARNER, on the 3d of June, in the province of New Grenada.

NURSERYMEN.—*Green-house Plants*—Best collection, A. FROST & Co., diploma; 2d do, ELLWANGER & BARRY, \$8.

Bouquets—Best two table, JOHN DONNELLAN and nephews, \$3; 2d do, A. FROST & Co., \$2. Best two round hand, C. J. RYAN, \$2; 2d do, ELLWANGER & BARRY, \$1. Best two flat hand, A. FROST & Co., \$2.

Roses—Best 25 varieties, WM. KING, \$5; 2d do, A. FROST & Co., \$3. Best collection, ELLWANGER & BARRY, diploma; 2d do, SAMUEL MOULSON, \$5. Best 18 new perpetual and hybrid perpetuals, A. FROST & Co., \$6.

Awarded JOHN J. THOMAS, for a fine display of roses, and other cut flowers, a diploma.

A very fine floral design three feet high, in the form of a vase, made of moss and choice selection of flowers, A. FROST & Co., a diploma. They also presented a bed, literally covered with roses, that attracted much attention for its novelty.

WM. KING also had in flower a *Cactus*, and a beautiful *Amaryllis Johnsonii*, of the former species.

ELLWANGER & BARRY had a plant of the variety *Speciosissima*, with beautiful crimson flowers.

Awarded a diploma to C. F. VAN DORN for a faithful representation of the *Calla Ethiopica*, and a painting of grapes, on canvass.

REPORT OF FRUIT COMMITTEE.—The fruit offered consisted principally of strawberries. Of these the display was very good, although the warm and dry weather that preceded the exhibition injured the size and appearance of the specimens, and prevented many from exhibiting who have

heretofore contributed valuable collections. Of varieties not exhibited here before, the most interesting were *McAvoy's Superior*, which promises to be a very productive and valuable variety; a seedling of Messrs. BISSELL & HOOKER, of fine flavor, and quite early, ripening with the early scarlet; *Walker's Seedling*, a very dark crimson, conical fruit, of good quality, and very productive.

AMATEUR CONTRIBUTORS.—T. A. NEWTON, for M. SOUTHWORTH, of Penfield, 2 varieties *Burr's New Pine* and *Hovey's Seedling*. A. PINNEY, Esq., of Clarkson, 5 varieties. R. G. PARDEE, of Geneva, 18 varieties in separate dishes, and a mixed dish, containing specimens of some 40 or 50 sorts.

NURSEYMEN.—Messrs. H. HOOKER & Co., 8 varieties; Messrs. FROST & Co., 2 varieties; ELLWANGER & BARRY, 30 varieties.

PREMIUMS AWARDED.—To AMATEURS.—For the best quart, to T. A. NEWTON, for *Burr's New Pine*; for greatest number of varieties, and best grown, to R. G. PARDEE.

To NURSEYMEN.—For the best quart, to ELLWANGER & BARRY, for the *Genesee*; for the second best, to Messrs. FROST & Co., for *Hovey's Seedling*; for the greatest number of varieties and best grown, to ELLWANGER & BARRY.

Of Cherries, few were presented, being too late for the early varieties, and too early for the late ones. ELLWANGER & BARRY exhibited a dish each of *Belle of Orleans*, *Early Purple Guigne*, *Bauman's May*, and *Early White Heart*, besides a few specimens of *Coe's Transparent*. Mr. POWIS, of Greece, a dish of *Early Purple Guigne*. Mr. LOVECRAFT, a branch of fine specimens, supposed to be *Bauman's May*.

The committee awarded a premium to the *Belle of Orleans*, being beautiful specimens of a fine new variety.

REPORT OF VEGETABLE COMMITTEE.—The show of Vegetables was quite small, it being too late for the earlier vegetables grown under glass.

JOHN DONNELLAN presented 4 heads of Lettuce, large and fine, and the committee would have awarded him the premium had there been the requisite number.

Premiums are awarded as follows:

To JOHN DONNELLAN, for the best three bunches of Radishes.

Cucumbers—C. F. CROSSMAN, 1st, and JOHN DONNELLAN, 2d premium.

Fine Rhubarb was shown by J. DONNELLAN and C. F. CROSSMAN—1st premium to JOHN DONNELLAN, 2d to C. F. CROSSMAN.

GEO. W. HART exhibited some very fine new Potatoes (*Early June*). They were full grown and excellent, showing skill and care in their cultivation. The committee cheerfully award Mr. HART the first premium.

Mr. McNAB, gar. to JOHN GREIG, of Canandaigua, exhibited three Cucumbers of extraordinary size, measuring some eighteen inches in length. They were of the black spine variety, and are really excellent, though many, from their appearance, were disposed to doubt their good qualities.

HORTICULTURAL FAIR AT AUBURN.—Horticultural exhibitions in June, so as to include Roses, Strawberries, &c., &c., appear to be rapidly on the increase. Cayuga county has long been distinguished for her devotion to fruits and flowers. Very much of this is doubtless owing to that truly distinguished and accurate pomologist and horticulturist, DAVID THOMAS, who has long been a resident of that county.

For the first time that county held a June exhibition on the 17th, and, I am happy to say, from personal observation, that in every respect it was worthy of her sons and daughters. Roses of the rarest varieties, finest specimens, and in the greatest profusion, graced the exhibition. Among the exhibitors I noticed the Messrs. MORGAN, Dr. THOMPSON, and HENRY WELLS, Esq., of Aurora; Mrs. E. THROOP MARTIN, of Willow Brook; Messrs. GRAVES, FREEBOFF, GOODWIN, JOHN H. CHEDDLE, H. T. DICKINSON, H. R. POMROY, O. W. WHEELER, Mrs. BUTLER S., and Mrs. S. BLATCHFORD, of Auburn. Their tables exhibited the largest and best collect-
hoquets I

have ever seen at one show. One gentleman, Mr. FREEOFF, placed twenty-nine handsome bouquets on the tables, besides a full exhibition of seventy-five named varieties of Roses, and other flowers in proportion, for which he took the first premium. Another gentleman, Mr. S. S. GRAVES, I was told, cut one thousand specimens of Roses for the exhibition, and really fine ones these were, too. Messrs. THORP, SMITH, HANCHETT & Co., of Syracuse, added decidedly to the exhibition from their fine stock.

There was also a very handsome display of strawberries, of such varieties as *McAvoy's Superior*, *McAvoy's Extra Red*, *Walker's Seedling*, *Crescent Seedling*, *Moyamensing Pine*, *Monroe Scarlet*, *Genesee Seedling*, *Hovey's Seedling*, *Burr's New Pine*, *Black Prince*, *Lizzy Randolph*, *Jenny's Seedling*, *Rival Hudson*, *Crimson Cone*, *Columbus*, *Boston Pine*, &c.; but the only individuals who exhibited more than four varieties each were P. R. FREEOFF, of Auburn, who took the first premium, and R. G. PARDEE, who, residing out of the county, was not in competition. The exhibition also comprised a fine show of Vegetables, both grown under glass and in the open air.

It was held at Standford Hall, one of the finest in the whole country for such an exhibition, and the fixtures and arrangements for the fair did great credit to their energetic committee. On the whole, the exhibition was in the highest degree satisfactory to the citizens of Auburn, and we bespeak for them another year a handsome delegation of floral and horticultural friends from abroad, for this infant society has given in this its first exhibition a distinct proof of what it can do when it gets into thorough working order.

R. G. P.

GENEVA JUNE HORTICULTURAL EXHIBITION.—Geneva held a very creditable exhibition on the 23d for the first time. One great reason why it succeeded so greatly to the gratification of all, was, doubtless, owing to the fact that numerous ladies, of the highest standing, wealth, and resources, most freely bestowed their time, taste, and produce of their conservatories, and fine gardens, to get it up and sustain it. As a consequence, the bouquets and arrangements of fine flowers were almost unequalled. Those exhibited by Mrs. GIDEON LEE, Mrs. T. D. BURRALL, Mrs. W. N. and L. CLARK, Mrs. BRADFORD, Mrs. SCOTT, and Mrs. SUYDAM, not to mention others, attracted marked attention. But to me, one of the most attractive bouquets I have yet seen on this or any exhibition, was one exclusively of wild flowers, gotten up in the best manner by J. M. BRADFORD, Esq.; certainly, some very rare and curious specimens graced the bouquet.

So many exhibited handsome Roses, that I hardly dare name any of the exhibitors. Captain DAKIN's Roses, Strawberries, &c., were very fine, and the same was the case with his next door neighbor, Mr. SUYDAM. Mrs. BURRALL, of course, had a large as well as select collection of Roses and other flowers.

The exhibition of Strawberries far surpassed any I have seen this season. Over one hundred dishes of this luscious fruit, comprising over fifty varieties, were on the tables. Mr. SUYDAM was awarded the first premium for the greatest variety, and Capt. DAKIN, and Mr. MESSER, for finest specimens, and Mr. W. F. COOK for best quart *Boston Pine*. R. G. PARDEE had a large number of varieties from his old garden in Palmyra, which were for exhibition merely. Messrs. THORP, SMITH, HANCHETT & Co., of Syracuse, and Messrs. DELL & COLLINS, from Waterloo, as well as the Messrs. MAXWELLS and Messrs. SMITHS, of this place, added much to the exhibition by the fine display of fruits and flowers from their nurseries. Our friends from Syracuse exhibited eighteen named varieties of fine Cherries, and lots of fine flowers; but I must not take up more room to refer to either lot, or specify wherein each one excelled. This exhibition was highly satisfactory, and we expect to have even a better one another year.

R. G. P.

EXHIBITION OF THE MONTREAL (C. E.) HORTICULTURAL SOCIETY.—The June exhibition this year, which took place yesterday, was not so extensive as we have seen it on previous occasions. Nevertheless, the various horticultural products which were shown were, in quality, fully equal

to any thing we have seen in past seasons. The most striking part of the collection was the Fuchsias, which occupied one end of the room, and were not only very handsome, but in great variety. Near them came several handsome descriptions of green-house plants, and some stove plants, sent by JOHN TORRANCE, such as have never before been exhibited in Montreal. Some of the varieties of these tropical exotics were remarkably delicate. Among the better known descriptions of flowers, the Roses occupied the first place; they were in great numbers and variety. Mr. COOPER's seedlings, though they did not come within the rules for a prize, merited especial remark. The Roses of Messrs. COCKBURN & BROWN were also well worth notice. These gentlemen had sent something like one hundred and fifty blooms, of all varieties and colors. Nor were their herbaceous plants (which, like the Roses, were merely exhibited, and not intended to compete) at all an unimportant part of the exhibition. Among them, that showy plant, the Phlox, was well represented; and we observed in the specimens three new varieties, which have been named *A. J. Downing*, *Henry Corae*, and *James Cooper*. These have never flowered till this year. The herbaceous plants of Mr. TURNER were also very much and justly admired, as were Mr. HUGAT's Geraniums, though they did not take a prize on account of some technical rules.

Among the vegetables we saw fine new potatoes, cabbages, peas, and cucumbers. The best of these were certainly Mr. QUINN's potatoes; but not having been grown in the open air, they were not eligible for a prize. We should be doing great injustice if we passed over the splendid collection of strawberries shown by Messrs. COCKBURN and BROWN, TURNER, and ARCHBOLD. We doubt if any English garden could show finer varieties, or specimens of the varieties shown.

A novel feature was some wild flowers sent by Mr. FARIS from Sorel. One of these was the Pitcher plant, or *Saracenia purpurea*, whose grotesque form, and constant supply of water in its cells are traditional; the *Kaldnia latifolia*, and the *Cypripedium alceolus*.—*Montreal Herald*.

HAMILTON (C. W.) HORTICULTURAL SOCIETY.—We understand the Hamilton Horticultural Society is in a very flourishing condition. Its exhibitions, two of which have been held the present season, have been excellent, and well attended by the intelligent citizens of Hamilton and its vicinity. The third exhibition is to be held on the 21st of September, and the liberal premiums offered for that show speak well for the Society. They show liberality and discretion, combined with thorough knowledge. The following gentlemen are office-bearers for the ensuing year:

President.—WILLIAM PRING.

Vice President.—WILLIAM MUNDIE.

Secretary.—WILLIAM CRAIGIE.

Treasurer.—ROBERT OSBORNE.

Managing Committee.—Messrs. S. Wilson, J. Thompson, G. E. Cartwright, J. F. Moore, James Gay, W. L. Distin, J. Gardner.

DELAWARE HORTICULTURAL SOCIETY.—At a stated meeting of this Society, held June 21, 1853, the Secretary reported the schedule for the fall exhibition, printed and ready for distribution.

E. TATWALL, Jr., proposed WILLIAM WEBB for membership.

CHARLES W. HOWLAND was unanimously elected a member of this Society.

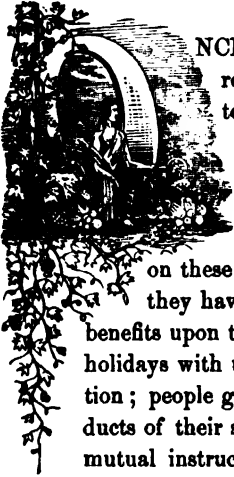
THOMAS STAPLER exhibited specimens of the *Wilder* and *Cushing* raspberries, and E. TATWALL, Jr., the *Wilder*, *True Red Antwerp*, *American Red*, and a variety from Canada which is everbearing; also, a variety of currants—*Red Dutch*, *White Dutch*, *White Grape*, *Red Grape*, *Knight's Sweet Red*, *May's Victoria*, and a large English gooseberry, without mildew.

WILLIAM K. SMITH exhibited four jars, one of Cherries, one of red, and one of black currants, and one of blackberries, put up one year ago.

WILLIAM CANBY, Secretary.

11-11-11

The Autumn Exhibitions.



NCE more September is upon us, and with it the accustomed round of annual fetes of rural industry commence. Some thirteen or fourteen States have announced their days of holding State Fairs; and in all these States there are county and other local fairs, at which the best products of the farm and garden are to be brought forward for comparison and competition. The amount of money and time spent in this country annually on these occasions is enormous; but so far it has been well spent, for they have awakened a spirit of improvement that has conferred vast benefits upon the industry and resources of the country. They are not mere holidays with us, devoted to frivolous amusements, sight-seeing, and dissipation; people go to these exhibitions to learn, and they bring with them the products of their skill and industry to compare with that of their neighbors', for mutual instruction and encouragement. The mere love of novelty can not induce so many thousands of intelligent people to leave their homes and business, and to incur all the toil and expense of attending these fairs. They have a higher purpose in view—they seek information; and in proportion as these shows afford facilities for obtaining this, will they become worthy of public patronage and support.

Hitherto the want of experience on the part of those who have been entrusted with the management of exhibitions has stood greatly in the way of their usefulness, and great dissatisfaction has arisen from people being unable to gain the information which they had just reason to expect. It is poor satisfaction for a man who has traveled hundreds of miles and made great sacrifices of personal comfort, to be jostled about in a crowd, scorched with heat and choked with dust, on the show grounds, and yet not be permitted to see the objects exhibited in such a manner as enables him to understand their merits. No pains should be spared in arranging and classifying all objects, not only in the grounds and on the tables, but in printed catalogues, in such a way as to enable judges to discharge their duties easily and accurately, and spectators instantly to understand the position that each article occupies, and the degree of merit that has been awarded it.

We are glad to see that this matter is receiving attention, but we fear it has not been carried out as far as necessary. We shall confine our remarks chiefly to the department of horticulture. Our State Society, for instance, offers a premium "for the best twenty varieties of good table apples, three of each variety, named and labelled, grown by the exhibitor." Now, suppose that a dozen individuals should compete for this premium; each one should be required to show just twenty varieties—neither more nor less—and the twelve collections should be placed side by side on the tables, so that not only the judges but the spectators might easily make their comparisons. Each one should be designated by a number only until the judges have made their

awards, and then the names of the exhibitors can be displayed as well as the awards. We have served enough on committees to know that some such an arrangement is absolutely necessary to ensure accurate decisions. Heretofore the general practice has been for every exhibitor to display his objects where he chose, and a dozen competitors for such a premium as we have quoted, would exhibit in a dozen different places, and have these twenty varieties of apples mixed up with twenty other varieties and a great collection of other fruits, leaving it for the committees to select varieties as they thought proper, and run about from one table to another to make their comparisons, thus losing their time and scarcely ever arriving at correct conclusions because it was impossible to do so under the circumstances. So we would have it in regard to "the best ten varieties of table apples," "the best seedling apple," "the best twelve varieties of pears," and, in short, every special object, or class of objects, for which a prize is offered. Let them be placed together and each be conspicuously designated, so that judges and spectators may know at once what particular merit the exhibitor claims for his articles. Then, again, amateur and professional cultivators should be assigned separate tables or departments, and not be permitted to mingle their contributions; and each of these departments should be conspicuously designated, that no doubt could be entertained as to what class they belonged to. Then, again, every exhibitor who shows twenty varieties of apples, or ten varieties, or six varieties, or any number of varieties of apples or other fruits, should prepare a list of the same, and then when the judges have decided, they should insert in their reports the names of the varieties to which they awarded the prize and state the principal points of merit, which could be done in a few words. If this were carried out, we should have useful reports instead of mere barren announcements that such a prize was awarded Mr. A., and such another to Mr. B., which amounts to nothing in the end, as far as the great aim and end of the show is concerned.

Another great difficulty is generally experienced in securing the services of faithful and competent judges, who appreciate the importance of the duties assigned them, and are willing to discharge them with care and patience. No fault can be found in general with the selections made by the Society; but it very often happens that of a committee of four or five not more than one or two will make their appearance, and the vacancies must be filled by such as can be found on the ground. Now, it is a responsible and delicate duty that committees have to perform, requiring careful and patient investigation and sound judgment, and, therefore, the greatest care should be taken in filling vacancies. There are always a number of persons ready to offer their services on committees, and especially on "tasting committees," who regard the duty as being simply to eat up everything that comes before them, if at all eatable. To allow such persons to associate themselves with committees is a manifest outrage upon the exhibitors as well as upon public decency. Every year we are surprised to see how far this thing is carried by persons of whom better might be expected. Committees should understand that they have no right, more than others, to cut up, eat and destroy people's fruits, and when they do so they should be exposed and punished. A mere taste to test the quality is all that is necessary and all that decency would permit. We

think it would be well for every society to define the rights and duties of its committees and have them printed on every schedule of prizes, so that there could be no mistake.

There is another point still to which we must call attention, and it is this: Both committees and exhibitors are generally at fault in not having their arrangements completed in good season. We have seen it happen more than once, that in the horticultural department of our State Fairs all the dishes for the display of fruits had to be procured, and all the fruits arranged, *after* the hour when all should have been submitted to the inspection of the judges. The consequence was that there was nothing but confusion and grumbling on all sides; nothing was right—nobody pleased. Timely and ample arrangements should by all means be made. It is much easier to make them before a crowd of uneasy exhibitors arrive, than afterwards. Abundance of water, dishes of various sizes, vases, pitchers, &c., &c., should all be in the hall in good season and placed in the hands of a person whose duty it would be to give them out as called for. Then officers should be in waiting to assign every exhibitor his position immediately on his arrival, so that he would not be subjected to the trouble and annoyance of inquiring all around where he could place his articles for exhibition. Exhibitors, too, would save themselves much trouble by being early on the ground and having their arrangements completed before visitors are admitted. Judges, too, should have their duties all discharged before a rush of spectators is admitted to interrupt or annoy them.

We feel it to be a very important matter for the country that these great shows be conducted with the strictest regard to order and regularity. The points to which we have called attention briefly, are but a few among the many that should receive attentive consideration, in order that the greatest possible amount of good may be derived from the time and money expended.

STRAWBERRIES, AND THEIR CULTURE.

WITHIN ten years past volumes have been written about strawberries, large numbers of new varieties have been introduced both of native and foreign origin, and multitudes of experiments have been made in order to discover the best method of cultivation. Withal, we must candidly say, that strawberry culture in general is to-day in miserably low condition in this country. See the fruit brought into our markets; the great bulk is small, sour, dirty stuff, that men who value their reputation as cultivators would be ashamed to offer. In private gardens how rare it is to see a really well managed strawberry plot. Why is it? The strawberry is one of the most delicious and healthy of all fruits, universally esteemed a delicacy—a luxury that could scarcely be dispensed with. It commands an amply remunerating price in all our markets; and our climate offers no serious obstacle to its culture in a high state of perfection. Then why is it managed so indifferently? This is a question that we wish cultivators to put to themselves, and to one another, and answer it if they can. We apprehend that the

chief difficulty lies in attempting too much. This, we think, is the prime error of American cultivators in every department, including both the farm and the garden. "A little ground well tilled" is not their maxim; they reverse this as nearly as possible. We do not wish to be understood as recommending people to throw away their time in frivolous attempts to bring a certain object or number of objects to a fancied state of perfection. We are well aware that in this country, where labor is costly and land cheap, there is a strong temptation to cultivate largely and poorly; but every where it pays to cultivate *well*. The men who have grown rich in this country by farming and gardening are not those who have had the most ground; quite the reverse. One man embarks in the culture of the strawberry for market; he plants an acre or two, or more. To prepare so much ground as it should be prepared, would involve a considerable expense; but the land is simply plowed as it would be for corn or potatoes. The plants are set, and from that time until the fruit is ready for market, an occasional scratch with a cultivator or horse-hoe is all the attention they receive. Dry weather sets in just as this fruit begins to ripen and no means have been provided to render watering possible—they must take the weather as it comes. No measures have been taken to keep the fruit clean, either; they are allowed to drizzle in the dust, so that three-fourths of the crop has to be taken to the pump and *washed* before they can appear on the huckster's table. Now the cost of picking this crop of small fruit is three or four times what it would be to gather a crop of good well grown fruit, and when gathered and carried to market, they must be sold at half price. Small, dirty, or washed and bruised, what is to be done with them but sell them for what they will bring? Thus an acre or two will not yield to the cultivator as much net profit as so many rods well managed, and the buying community are left to wonder where all the fine strawberries go that they read about.

Coming home for an illustration, a few years ago several persons about this city embarked with considerable spirit in the culture of strawberries for market. Some pains were taken to prepare the ground and get good varieties, and the first two or three years some approaches were made to reasonably good culture. The consequence was our markets were filled with excellent fruit, people paid cheerfully liberal prices, and the growers themselves reaped a rich harvest. The zeal of the new cultivators, however, waxed cool; their plantations became old; they failed to renew them in season, they were abandoned to themselves, and a small crop of miserable fruit was the consequence, yielding not enough to pay for picking and selling.

Such is precisely the course pursued by a majority of the market growers that we are acquainted with, and a large majority of private growers follow suit. A crop or two of fine fruits are produced while the novelty of the thing and the zeal of the beginner lasts, and then all go to ruin. People who embark in strawberry culture must understand that a strawberry plant is different from the apple tree, which when once planted can take care of itself pretty well if in a good soil. The strawberry plant wants continual care—a multitude of little attentions. It must have deep and rich soil to begin with; strawberries should never be planted upon a soil, however good, unless it has been deepened by subsoil plowing, or trenching, at least eighteen inches, and two feet is

better; for the strawberry requires a great quantity of moisture and the roots will seek it to a great distance if the ground be in a good condition to allow them. Besides deep and rich soil, ample provision should be made to water them at the time when the fruit is swelling and dry weather almost sure to prevail. A sprinkling of water is of no use—a good drenching to the very rootlets is required once a week at least. Then, all the time, from the moment the plantation is made, the ground must be kept clean and all surplus runners likely to weaken the bearing plants removed. As the fruit begins to color, some straw, or other material, should be laid on the ground around the plants to keep the berries clean so that they may go to the table as they come from the plant, with their color and flavor unimpaired by such an outlandish process as *washing*. Then, with all this treatment, the beds must be renewed as often as once in three years at least, and in doing this we recommend choosing, when practicable, new ground. We have firm faith in the wisdom of rotation in these matters.

Now there is nothing new in all this, nothing but what good cultivators have known and practiced for half a century, or more for aught we know; but it is sometimes well to call attention even to such old and homely truths. We might cull from the writings of the day on this subject, any number of prescriptions and recipes, but as we have tried few of them, and as in our own practice we have not found them necessary, we must leave it to those who choose to search them out and apply them. In nine cases out of ten, people will succeed better by practicing well what they know than by following doubtful experiments; this remark we intend for the man of cultivation. Of course, we can not but regard with interest all efforts of zealous men to improve upon old methods, and to discover new and valuable fertilizers; what we mean is, that in common practice no novelty should be followed until its merits have been thoroughly canvassed, and well authenticated.

“When is the proper time, or rather the best time, to plant strawberries?” is a question we are often asked. We have no hesitation in recommending the spring—the month of April, or the beginning of May, in the north, as the *surest*. The plants at that season are well-rooted, and there is scarcely the slightest risk of a failure. If the ground has been well prepared, and they are well attended to during the season, a fair crop may be had the following spring. By planting in August or September, a crop may be had a year sooner, but it will necessarily be a light one, and there is a great risk on account of the warm and dry weather so prevalent in these months. To plant at this season with success, the plants must be well rooted, and the ground thoroughly wet with rain or otherwise before planting. To plant in dry earth, and sprinkle after planting, is a mere waste of plants and time. Amateurs who have the plants on their own grounds, should take the strongest runners as soon as rooted and transplant them into a shaded, cool border, and there allow them to remain until well fixed in the ground, when they can be taken up in a moist time with some earth about the roots and transferred to their permanent situation; the greater certainty of this method will amply repay its extra expense. Even when plants are purchased, it will generally be found safer to plant them temporarily in a cool border until re-rooted, and then remove them with earth to the open, permanent beds.

A very common error is to plant too close; sufficient space should be left for the proper cultivation of the soil, and for passages to and from the plants. In gardens, we prefer planting in narrow beds, each containing about three rows, a passage of two and a half feet between each bed, and twelve to fifteen inches each way between the plants. In extensive field-culture these spaces would not be sufficient; three to three and a half feet space between the beds, and eighteen inches between the plants would be little enough.

Now as to kinds. Varieties of strawberries have lately grown so numerous, that it is really embarrassing for the amateur to make a selection; it is the more so, too, on account of the variety of opinion given respecting the qualities of varieties. One says, *Hovey's Seedling* is the best; another, the *Burr's New Pine*; another, *McAvoy's Superior*, or something else. In England, as in this country, varieties have increased to a wonderful extent. *Keen's Seedling*, that at one time was the most popular variety in Great Britain, is now, although highly prized, in a great measure superseded by the *British Queen*, the great strawberry of England. We observe that it took nearly all the prizes at Chiswick on the 9th of July last. *Myatt's Surprise* took one premium, and a new seedling named *Prince Alfred* was described as large and handsome. The *Elton*, *Kitley's Goliath*, *Cuthill's Black Prince*, and *Alice Maude* are all fine English sorts, but none of them prove valuable here. Our climate seems in some way or other to prevent the perfect development of the floral organs; as the fruit seldom sets well. We have tried nearly all the English varieties of note, and find them of no value for profitable culture. The *Bicton Pine*, a large white variety, promises to be worthy of a place in amateurs' collections—desirable for its color, especially. We have had it bear two seasons, on a small scale, and it has quite come up to our expectations. *Hovey's Seedling* has for several years been the "*British Queen*" of this country. It is a magnificent fruit, but is uncertain, producing heavy crops in some seasons and localities, and failing totally in others. This has been its history from its first dissemination to the present time. While we would not dispense with it, even in a small collection, there are many others on which we would rather place our dependance for a large crop. *Burr's New Pine* and *Large Early Scarlet* are productive, good sorts. The *Iowa* is an immense bearer (a staminate), but small; *Burr's Columbus* is a great bearer, and a showy, good fruit; *Burr's Ohio Mammoth* is a magnificent fruit, pale colored, like the *New Pine*; but although the fruit show well on the plants, they do not bear picking long. *Black Prince* bears enormous crops with us every year, and the fruit, though generally of indifferent quality, is pretty good when fully ripe; *Walker's Seedling* is a good variety, quite conical, and as dark almost as the *Black Prince*. Our seedlings, *Monroe Scarlet* and *Genesee*, have borne abundant crops.

*McAvoy's Superior** having been awarded the \$100 prize at Cincinnati, excited considerable expectation, and now it seems to be very variously estimated. Mr. PARDEE, in our last number, gave the result of his trial. Our specimens were scarcely so fine as his, yet we consider it a prolific, good variety. It has one defect—it does

* See Frontispiece.

not fill up perfectly. It is bright colored, and of good flavor, though not first rate. At Boston, it appears, from *Hovey's Magazine*, that all the Cincinnati varieties have proved inferior. *McAvoy's Superior*, Mr. Hovey says, "is the best flavored of the four, but far inferior to many of the older varieties." *Longworth's Prolific* is a good bearer, but it is superior in nothing to some of the older sorts. We learn that at Pittsburg the *McAvoy's Superior* has proved almost a failure in every case where it has been tested.

The old vexed question of sexes has been revived latterly, but it is a mere waste of time to discuss such a question. It is very well understood, and has been for fifty years, that no variety wanting in stamens will bear a crop by itself. In Europe, the *Hautbois* have been examples of this kind. Variations and defects in the sexual organs, so-called, are much more frequent in this country, and in the case of some forms a permanent characteristic. Where pistillate sorts are planted, therefore, a small proportion of staminate must accompany them.

WINDOW GARDENING AND PLANT CASES.

For several months we have had numerous inquiries respecting "Wardian Cases" waiting an answer. The following article, with illustrations, which we select from *McIntosh's Book of the Garden*, is very complete, embracing a full and satisfactory description of all the most elegant and convenient contrivances for keeping house-plants that are known or in use in England, or on the Continent, where such things have been carried to great perfection. There are thousands of people shut up in cities who can have neither gardens nor green-houses, and yet can not wholly deny themselves the pleasure of cultivating a few plants; and this can not be done in the dry atmosphere of living-rooms in a way to afford much pleasure.

"The necessity for adopting window gardens, Wardian cases, or something equivalent, by those who are fond of having plants in their rooms, will, we think, be strengthened by the following remarks by Professor LINDLEY :

"What, it may be asked, is there in the air of a sitting-room which plants are thus unable to support? Can any thing be purer than the atmosphere of an English drawing-room? Perhaps not; but it is this purity which in part inflicts the injury. Plants would thrive better if it were otherwise—but it is more especially its dryness. Let any one measure the moisture of a sitting-room and the open air, and he will see how great a difference prevails. We have,' says the learned Professor, 'this moment tested it by SIMMONS's hygrometer: in the open air this instrument indicates 40°, in a sitting-room 60°. When plants are kept in a dry atmosphere they rapidly lose their water of vegetation; the sides of their pots are robbed at the same time; and it is impossible for plants to suck out of soil thus partially dried the moisture demanded for the sustenance of their exhausted foliage. Such a state of things is inseparable from a sitting-room. To render the latter congenial to plants, it would be uninhabitable by ourselves. The extent to which plants are injured in a common sitting-room is strikingly illustrated by the condition of cut flowers. Let two clusters of fresh-gathered flowers be introduced into a sitting-room: place the one in the mouth of a narrow-necked jar of water, and arrange the other upon such a shallow

pan of water as a deep dish will furnish. It will be found that the latter will be perfectly fresh days after the former have faded. The reason is, that in the narrow-necked jar the flowers have no access to water except through the ends of their shoots, and are surrounded with a very dry air; while, in the flat dish, they are able to absorb abundant water, because a large part of their surface is in contact with it, and are, moreover, surrounded by air incessantly moistened by the vapor which continually rises from the dish.

“Of this we may be sure, that darkness, dust, heat, want of ventilation, and all the other calamities to which plants in sitting-rooms are subject, are as nothing compared with the inevitable dryness of the air—which, indeed, acts injuriously not merely by exhausting plants of their water of vegetation, but by lowering the temperature of the pots in which they are grown, in consequence of the evaporation constantly taking place there. What makes the evil greater is, that the plants which are purchased for sitting-rooms are invariably brought into high condition by being grown in a damp atmosphere. They are transferred from the hands of skilful gardeners, armed with the most perfectly constructed forcing-houses, into the care of inexperienced amateurs, whose means of maintaining a plant in health are something considerably less than nothing.’

“Under the head of *Window Gardening* we shall include the various little contrivances of our Continental neighbors, who carry the cultivation of plants in rooms, on balconies, and in windows, to a much greater extent than has hitherto been done in this country, more especially in towns and cities, where the enjoyment of green-houses and conservatories is often denied them.

“N. WARD, Esq., an amateur cultivator, who lived many years in the heart of the city of London, carried the cultivation of plants, even rare ones, and those of difficult growth, to an amazing state of perfection, in small portable green-houses of elegant forms, and which have now become almost an indispensable article of furniture in every drawing-room. These are called Wardian cases, and are found to answer the purpose intended most completely, and are, perhaps, upon the whole, much better adapted for the end in view, as they are at the same time far more convenient and elegant, than the window-cases so frequently met with on the Continent—the former constituting an elegant article of furniture within the room, while the latter is attached to the outside of the window. They preserve the plants much longer in bloom or in a healthy state than the usual mode of setting them in stands or on tables, and at the same time afford a degree of agreeable enjoyment in their management.

“Mr. WARD has published a very interesting pamphlet on the growth of plants in such cases, which those interested in the matter should peruse. It contains, as Dr. LINDLEY has justly observed, ‘all the information that can be given; but it is in few hands, and everybody does not understand the principles on which his cases are constructed. It is imagined, by uninformed persons, that complete exclusion of air is the entire object which Mr. WARD sought to secure by his contrivance; but we need hardly tell the reader who knows any thing of the atmosphere, that such an effect can not be attained by a WARD’s apparatus: the air finds its way into every place not hermetically sealed, and such contrivances as close glazing, puttying and so forth, can not exclude it. What Mr. WARD sought to gain was uniformity of moisture and an exclusion of soot: and these he effectually secured. It is the dryness of the

air that destroys plants in sitting-rooms and great towns, and not impurities in the gaseous constitution of the atmosphere, the importance of which has been singularly overrated. By enclosing plants in tightly-glazed cases, light is admitted, soot is excluded, and any desirable amount of moisture is securable. There are, however, some practical difficulties in the way of growing plants in close moist cases, which amateurs unacquainted with the nature of plants are unable to overcome. Among these difficulties, the principal is the adjustment of the amount of moisture to which a plant is exposed in one of these cases, to the surrounding heat, and to its own nature. Another is the prevention of dew upon the inside of the glass, by which the interior is often entirely hidden. These are practical difficulties that must exercise the ingenuity of cultivators. Upon the former we can give no information, because each species requires a special consideration. As to the deposit of the dew upon the glasses, we may observe, that as this is owing to the inside of the case being colder than the air that surrounds it, the only course to take is, either to warm the internal air by some means, or to open a door in the case for a short time; and as the latter is the most easy, and is quite efficient, it will be the more generally adopted.'

"Plants have been kept in Wardian cases for upwards of twelve months in good health and condition without renewal, and all this while but with one supply of water. 'This to some may appear strange, but the principles of evaporation and condensation sufficiently explain it. The heat of the sun, or even of the room in which the case stands, naturally produces evaporation through the day time, and during night the process of condensation takes place, and the moisture which has been evaporated is returned to the soil. These two principles are in active operation alternately day and night. It ought to be noticed, however, that owing to the growth of the plants, as well as other contingent causes, such as apertures in the framework, the quantity of moisture in time becomes lessened; and when this is the case, a fresh supply will be necessary. As monotony and continuity cease in time to afford gratification, and as it may happen, no doubt, that some of the plants will grow beyond their bounds, fresh removals and replacements will be found necessary.'—*Gard. Jour.* Add to this, much of the pleasure to be derived from plants growing under one's care, and in one's drawing-room, would be lost, were we not allowed to arrange and re-arrange them, according to our taste and fancy.

"M. VICTOR PAQUET, in '*Almanac Horticole*,' speaking of window gardening as followed in Belgium, says: 'The balconies are turned into green-houses, and you may find, on the fifth or sixth floor, a miniature stove, gay with the brightest flowers, and the greenest foliage. In Paris there are many such contrivances, especially two on the fourth floor of a house in the Boulevard de la Madeleine. Here are to be found the rarest plants. Camellias grow in the open ground; Passifloras cling to the columns; the creeping Fig forms a carpet upon the walls,' (*Ficus stipulacea*, we presume,) 'and water plants start up from tiny basins, curiously contrived in the solid brickwork. By turning a screw a stream of limpid water flows down a rock, from whose crevices start up Ferns and Locopodiums, and such things. And what is it that adjoins this little paradise but a bed-room!'

"Enjoyable as such a window garden must be to the lover of flowers, it is, perhaps, upon a scale beyond the reach of more humble admirers of Flora. The Belgian window garden, figured and described by M. PAQUET, is within the reach of all, and

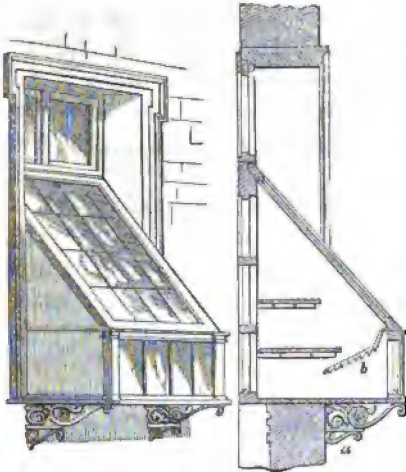


Fig. 1.

Fig. 2.

will be understood by a glance at the annexed elevation, fig. 1, and section, fig. 2. In the latter it will be seen that the sill of the window is extended in breadth beyond the face of the wall of the house by brackets *a*, generally highly carved, as in the sketch; two or more shelves are placed across the window, which, with the sill, are covered with plants in pots. A roof of glass is hinged to the window-frame, at any convenient height; for it should here be remarked that windows on the Continent are, in general, much higher and broader than with us; if, for example, (as shown in the diagram,) the frame extends three parts of the way up, sufficient light is admitted into the room. These sloping roofs

fall down upon a stone or wooden front, either solid or filled with glass, as seen in fig. 2, and are opened and shut for ventilation by raising up the bottom part of the roof, and securing it at any point of elevation desired, by the curved handle *b*. The plants are watered and arranged from the room within, as the windows are hung on hinges, in two parts, and do not generally run up and down, as with us.

"In cases where the sloping roof extends to the top of the windows, as is sometimes the case, the window being thrown open, the owner can enjoy their fragrance and beauty, while the plants are not subjected to the dust, heat and dry air of the room, and with the large squares of glass used, they lose little of their effect, even when the window is shut altogether.

"Fig. 3 is another example of the same kind of window garden, placed opposite the center window of a drawing-room, and extending considerably beyond the breadth of the window on both sides. It is supported on highly ornamental metallic brackets, and the bottom part, in which the pots are set, or plants planted in, is of stone, slate, cast-iron, or wood—the three first, of course, the most durable—as this part of the case is kept constantly wet. It should rise to the level of the window-sill, but no higher; indeed, a few inches lower would be no disadvantage.—

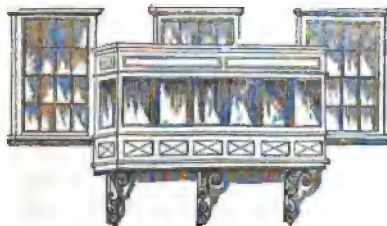


Fig. 3.

Large panes of glass are used both for the front, ends, and top—one or more of them may be made to open for ventilation: the wall of the house and the casement of the

window serve for the back. The operation of arranging the plants is, of course, to be performed from the room within by opening the window.

"Fig. 4 is the same kind of case adapted to a single window; the ventilation, although shown in front, may be better if placed in the ends.

"Again, where double windows are used, and more especially where the outer window projects beyond the wall of the house, great accommodation is obtained for the keeping of plants. When these window gardens upon the last principle are made to project for two or three feet beyond the wall, as shown in section, fig. 5, the ends should be of glass also, and in them the ventilators should be placed. Windows facing the full sun should, in summer, be provided with an awning, to shade the plants during intense sunshine. This will prolong the season of flowering considerably; while a thicker covering substituted during winter will exclude the cold in ordinary weather; and a tea-urn, or similar vessel, replenished with hot water, or an iron heater dropped into it in the usual manner, will exclude frost of considerable intensity. Sometimes neat green gauze blinds are fastened to the top of the sloping roof inside, and made to run on wires close to the glass, for the purpose of shading; and again, the bottom and shelves are often so contrived, by having wire basketwork round their edges, that the pots are plunged in green moss, which, being kept constantly moist, supplies the plants with moisture, and counteracts the bad effects of a scorching and drying up sun.

"The lady's plant-case, fig. 6, is a miniature adaptation of the Wardian case, and is admirably calculated to form an interesting object either in the drawing-room or hall. The vase, as will be seen, is furnished with a groove all round, into which fits a glass shade, which covers the plants. It may be all in one piece, or framed with elegant and light brass, copper, or even silver sash-bar, and glazed with long, narrow, strips of glass, bent to the proper curvature. Indeed, it may be made to represent a conservatory in miniature.

"Large crystal bell glasses are now made for the purpose of covering a whole vase of plants; and we question much but ere long every flower table or stand will be fitted with a glass shade, both when cut flowers are used, and for plants in pots. In both cases the duration of the flowers and plants in a perfect state will be prolonged, and their beauty unimpaired. At all events, their



Fig. 4.

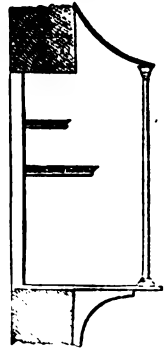


Fig. 5.

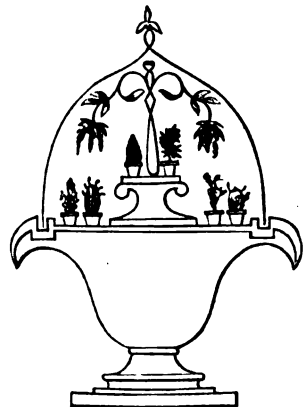


Fig. 6.



Fig. 7.

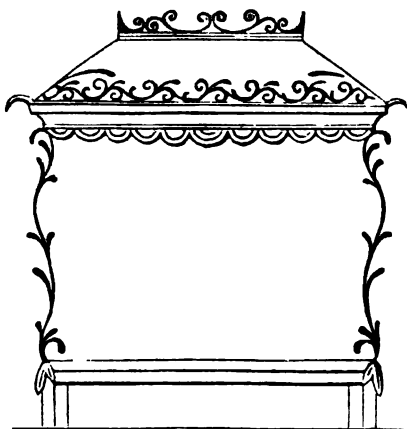


Fig. 8.

use during night must be obvious, more especially in apartments lighted by gas.

"The annexed, figs. 7, 8, represent two very pretty Wardian cases, exhibited at one of the Horticultural Society's fetes at Chiswick. Fig. 7 is seven feet high, four feet two inches wide, and two feet six inches in depth. Fig. 8, four feet high, three feet broad, and one foot eleven inches in depth. The workmanship is in the very best manner of gold-colored metal, the bases being of polished wood lined with metal, and moving on castors; they are glazed with the best sheet glass, and each has a door at the end. Very fitting ornaments, we would say, for any drawing-room.

"When the Wardian case was first brought into notice, an opinion got abroad that they must be constructed so as to be perfectly air-tight, as if plants, more than animals, could exist without that vital element. They are in general fitted pretty close, but by no means air-tight. The principle which governs the health of the plants in them is purely mechanical; the water which is in the soil or medium the plants are set in, is turned into vapor by the heat of the sun or room during the day, and becomes condensed upon the inside of the glass, and is returned again, as soon as the glass becomes so cold as to condense the vapor on its under surface. This process of evaporation and condensation goes on day and night, governed by the temperature of the room the case is placed in; and under these conditions many plants luxuriate in an astonishing degree.

"Fig. 9 represents a Wardian case mounted on a stand, with castors, for the more readily moving it about. The dimensions are as follows. The stand *a* is twenty-two inches in height, fitted with a groove all round for the reception of the base *b*, which is eight and a half inches deep; the glazed top or cover *c* is nineteen and a half inches high, making the whole height of the case four feet two inches. The sides of the box are of mahogany, $1\frac{1}{4}$ -inch in thickness, and the bottom of deal, $1\frac{1}{4}$ -inch thick, well framed and dovetailed together, and strengthened with brass bands, as seen in

the sketch, and with two cross bars beneath. The upper edge of the box is furnished with a groove for the reception of the glass roof, and this groove is lined with brass, to prevent the wood from rotting. The roof is composed of brass, and glazed with the very best flattened crown glass. The brass astragals are grooved for the reception of the glass, and not rebated, as in ordinary glazing. The length of the case is three and a half feet by two feet in breadth. Eyed studs are cast on the inner side of the ridge astragal, about half an inch in length, for the purpose of suspending small orchids or ferns from the roof. The inside of the box is lined with copper, and at one of the corners an aperture is formed into which a copper tube, two inches long, is inserted, and furnished with a cock for withdrawing any superfluous moisture that may at any time accumulate within the box. One of the panes in the roof is made to draw out, being less firmly set in the groove of the astragals. This provision is necessary for the occasional arrangement of the plants, but the general arrangement is made by lifting the top off entirely. This is, however, seldom necessary, as plants both in pots plunged in moss, and planted out in proper soil, and well drained below, have been kept in a healthy state from four to nine months without removal.

"Of Wardian cases, figs. 10 and 11 are elegant examples, calculated for a drawing-room or saloon. In fig. 10

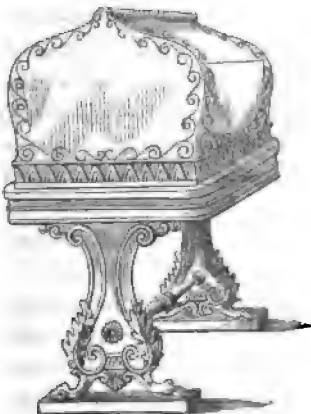


Fig. 11.

the top lifts off for ventilation, and is fitted closely into a brass groove, to which all the other bars are attached. The under part also fits into a groove in the raised part of the table, and has entirely to be lifted off when the plants are introduced or arranged. The whole is made of brass highly polished, and plate-glass bent to the necessary curves in making. Fig. 11 lifts off in one piece, and is formed of polished brass, as in the last example."

We shall conclude this excellent article in our next number. The winter, when all is dreary without, is the season when plants in parlors are most needed. We think we could give nothing more seasonable.

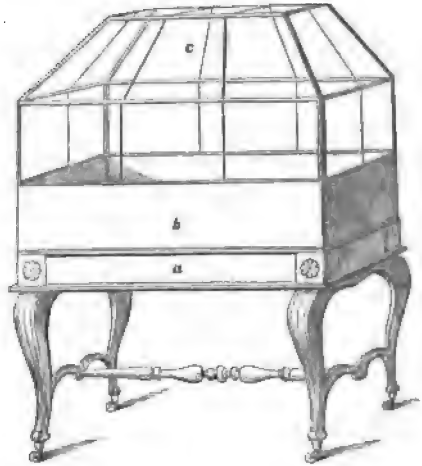


Fig. 9.



Fig. 10.

NATIVE AND FOREIGN FRUITS.

BY S. L. GOODALL, SACO, ME.

IT HAS been so often said that native varieties of fruit are necessarily better adapted to the locality where they grew, because, thus growing, they acquire characteristics peculiarly fitting them to such place, that the idea has almost passed into an axiom and is assented to by perhaps a large majority of cultivators, and any attempt to advance an opinion at variance with it may appear simply ridiculous. Yet, as everybody in this happy country is at liberty to be just as ridiculous, or just as heretical as he pleases, you will doubtless give me leave to say that one individual does not assent to it.

I am reminded of the subject at this time by the following passage in an article "On raising fruits from seed," in the August number of the *Horticulturist*: "A variety springing up from the seed, in any given locality, is, in the course of its production, endowed with a constitution and habits adapted to that locality, in a particular manner," &c. Now, if I understand the writer, he means to assert that sometime between the germination of the seed and the production of fruit, the plant is endowed with its constitution and habits, and that these vary according to locality. If he does not mean this I take no exception to it; but if he does—and what other construction can be fairly put on the words "springing up from the seed,"—I join issue with him and advance the opinion that it does not teach the facts in the case, but that, contrariwise, the habits and constitution are decided or bestowed *during the growth of the seed* from which the plant is destined to spring, and that when this seed is once matured it contains wrapped up within it that which stamps indelibly the character of the tree and fruit to grow from it, and that the accident of locality, soil, climate, or other, affects only the *development* of that character and not the character itself.

It is no part of my attempt to explain the laws which govern the production of varieties, for I believe that those who have bestowed most research into them have the liveliest sense of the profundity of their ignorance. All I maintain is, that whatever they may be, their operation is at an end before the germination of the seed. We hear no such notions advanced as to the necessary superiority of native varieties by practical gardeners, in respect to vegetables. They take the utmost pains to procure seed possessing the requisite qualities; but having planted it, do they attempt to change these qualities? Not at all. They labor diligently, and only to secure the most favorable conditions for their development, leaving the production of new and varied properties to successive generations, from seed, and anticipate such changes only in the seed.

We might ask what is a native? The child of European emigrants, born the day after arrival here, may be, technically, a native; but is it the less of foreign origin? The Swedish turnip has been grown here many years, and yet is commonly denominated a foreign variety. The *Petre* pear grew from a seed matured in England, and because that seed was brought across the water and planted in Pennsylvania it is called

a native fruit, and so entitled to consideration as possessing the supposed excellencies of a native sort. Do such frivolous distinctions make any difference? Does anybody suppose that scions of the *Petre* pear sent to England would produce a fruit varying from what would have grown had the seed been originally planted there?—provided, of course, that the conditions of development in each case are equally favorable to the *health*, simply, of the tree. Or, that if the seed which produced the *Dix* pear had been sown in Belgium, and not in Boston, and trees or scions thence brought to Boston, would the tree have proved less adapted to cultivation in Massachusetts, or the fruit worse?

If the current opinion be correct, we ought always to find fruits better where they originate than elsewhere. Is it so? Can no one recollect instances of fruit, which originated in the Eastern States, being returned from the west so changed for the better as to escape recognition by the most critical judges until scions again set here, and afforded their former facilities for development, produced a well known and easily recognized acquaintance of former years? The *Rostieser* is understood to be a seedling of Germany, where it yielded a second or third rate fruit; but trees or scions brought here, produce a fruit so much superior, as to be almost, if not quite, a standard of excellence in its season, and the tree proves as hardy as any native of Maine—and surely we ought to know something about hardiness where the mercury sometimes (rarely, to be sure,) freezes in the thermometer.

Suppose you plant a pear seed at Rochester and it yields a desirable fruit, and you send me scions, which upon trial here prove unable to withstand the severity of winter, what does it prove? If it proves anything, only this—that if the tree had been grown here, it would not have survived to bear fruit, for seedlings are more tender in infancy than at adult age. You send scions to other distant places, and in one it is found of better flavor and in another worse; in one more productive, and in another less. And this only shows that had the tree grown in either of these localities it would have been deemed more or less valuable.

Experience teaches that some fruits are adapted to a wide range of soil and climate, and others restricted to narrow limits. What could there have possibly been in the accidents connected with the growth of the seedling *Newtown Pippin*, which deprived it of the capability of developing its excellence away from the neighborhood of the Hudson? or what endowed the seedling *Green Gage* with the power to exhibit its worth through scores of degrees of longitude, and nobody knows how many of latitude. Nothing at all. The endowment lies further back—viz., in the seed. The proposition here combatted seems to me to have been *assumed* from the first, rather than proved, and so plausible as to have escaped examination, thus leading many astray.

Was not even DOWNING somewhat wide of the mark when he penned the following sentence—"That in proportion as a variety has been brought originally from a locality in Europe most nearly similar to that where we would grow it, are its vigor and productiveness retained in our own soil." Now, take the *Flemish Beauty*, which is named as perhaps the best proved of any foreign variety in this locality, as perfectly hardy, (more so than the *Fulton*, which is credited to Maine, though the seed grew in Mass-

achusetts, or than the *McLaughlin*, of which, by the way, nobody can tell the origin, the oldest known trees here being grafted,) perfectly healthy, abundantly productive, vigorous in growth, and the fruit fairer than as grown in Massachusetts and New York, and tell me what are the particular items of similarity between Belgium and Maine which caused this fruit to retain its vigor and productiveness here?

Let me not be understood, by any means, as undervaluing native fruits. Nobody thinks more highly of them, or would more strongly urge their production by every cultivator; only I do not believe in such a rapid manufacture of a *native* that one generation, or two, or five will develop the highest degree of excellence. There is doubtless a nucleus of truth to which this, that I maintain to be error, has attached itself. Rare is it for any error to obtain extensively which has not truth enough to hold on by.

The same paper, by DOWNING, from which the above quotation is taken, has the following, which may indicate what it is: "There appears to be something in our new soil, and distinct climate, which imparts new vital powers and gives a new type to the offspring of an old stock in the vegetable races of the other continent." Perhaps a different formula may approximate towards an indication of it, to wit: That there is in the productions of nature a *tendency* implanted by the beneficent Creator to *change* it into a type specially adapted to the peculiarities of each locality, and this by successive generations from the seed. We see such a tendency with unusual clearness in the case of maize or Indian corn. Plant seed, adapted to one locality, in another at a distance, and year by year we gradually find it varying, until at length it reaches the type best adapted to its new situation. Something analogous to this may prevail among fruits; but whether just so or not, go on to plant seeds and continue to plant, and when you obtain a desirable acquisition, (your judgment being, perhaps, unconsciously warped by parental fondness,) don't spend the remainder of your energy in extolling its wonderful merits as a native, but rejoicing in the accomplishment of one step, go on in the right direction to cross-breed it with others of known merit, and so effect another advance in what may prove a long race before the highest attainable point of excellence is reached.

STRAWBERRIES AT THE SOUTH.

BY WM. W. WHITE, ATHENS, GA.

I RESUME my notes upon fruits with the strawberry—a fruit capable of being brought to great perfection in this climate. To make the most of a strawberry bed, it requires a suitable situation and soil, clean and deep culture, vegetable manures, regular watering in dry weather, and mulching the roots. The varieties we will consider hereafter.

As to situation select the lowest part of the garden. A sandy piece of bottom land near some stream where the soil is deep, moist and cool, is particularly suitable for this plant. No trees should be permitted to over-shadow and drain the moisture

of the soil. Fresh cleared lands are best and most easily kept free from weeds. Dig the ground two spades deep, the better to enable the plants to withstand drouth. A soil rich in nitrogenous matter is not desirable. Decayed vegetable substances are the best applications in order to produce fruit, animal manures increasing the growth of vine and leaf without much increase of fruit. A thick coat of swamp muck or leaf mold decomposed by the action of leached or unleached ashes, and well incorporated with the soil, is decidedly the best application in order to ensure a crop.

When the soil is prepared and levelled, make your rows two feet apart. Set the plants fifteen or eighteen inches apart in the row. Select stout healthy runners, rejecting old roots, and plant first three rows of pistillates, then a row of some good hermaphrodite variety, then six rows of pistillates, then another of hermaphrodites, and so on until the ground is planted. Choose damp weather for the operation. They may be planted, however, at any time in freshly dug soil in the following manner:—Make holes at the proper distances in the rows; lay the plants carefully therein, spreading out the roots just as they grew; pour on them a half pint or so of water from the spout of a watering-pot, working the earth in about the roots, and finishing by covering them fully with the moistened soil, and over this place some of the dry earth pressing it firmly about the plants. Choose the evening for planting, and keep the roots from exposure to the sun until replanted. Remove the larger leaves to diminish evaporation. Cover the earth between the plants, but not the plants themselves, with a mulching of straw, decayed leaves, or old tanners' bark. They may be transplanted at any time, but the last of September will give them time to establish themselves, so as to produce well the ensuing season. Newly planted beds are more easily kept in a bearing state through the entire season. As soon as the blossoms begin to appear the ensuing spring the great necessity is water, which should be given liberally, both to swell the fruit and to force the plant to throw up new fruit stems. If three days pass without a shower, sprinkle the foliage every evening. Mr. PEABODY is thus able to produce abundant crops from March until frost. Keep the ground always free from weeds and clip off the runners before they emit roots, until late in the season, when they may be allowed to root in order to form new beds and also new stools for the next year's crop. Every winter the plants should be thinned to their original distance, selecting new stools. Dig the bed deeply between the plants and mulch as before. If the crowns of the plants are covered they will generally die out. Do not allow the hermaphrodite plants to overrun and crowd out the more productive pistillate varieties.

For a spring crop, the system of culture by alternate strips is the most convenient. Indeed, when peaches and other fruits become abundant, one at last grows weary of even strawberries. To condense the whole subject of strawberry culture into a few words, *plenty of water and keeping the plants at suitable distances, in well cultivated and mulched soil*, will extend the strawberry season almost indefinitely.

The following varieties have been cultivated in our gardens, some of them, however, but for a single season, and among the varieties lately obtained, there have been none which have given us much encouragement to increase the list beyond the first four:

1. *Large Early Scarlet*.—the most valuable hermaphrodite variety. Its points of excellence are, bearing uniformly a good crop planted by itself; great hardiness in resisting drouth, producing fruit of fair size and flavor when other varieties entirely cease bearing without artificial watering. I could not help observing this the present dry season. It is equally hardy in resisting cold. Another good quality is, its distinctness of foliage, enabling the cultivator to leave a due proportion in his beds of perfect flowered and pistillate varieties. Properly cultivated, it is of good size and flavor, and being perfect flowered, if but one variety were cultivated this would be the most desirable. It can be kept in bearing through the season.

2. *Hovey's Seedling*.—If we consider size, flavor, hardiness, firmness of the berry for market purposes, productiveness, ease of gathering, and its habit of long continued bearing when properly cultivated, in connection with its excellent flavor, it is doubtful whether this strawberry will be soon excelled. It is nearly as hardy as the foregoing, but requires more water to make it swell its fruit. As it is pistillate, it needs a fertilizer. It is generally picked for sale before it is ripe, and it is then too acid; but when properly matured, it is excelled by few. For market purposes, the foregoing two varieties are quite sufficient.

3. *Bishop's Orange*.—Why does no one speak a word in favor of this fine old variety? Mr. THOMAS says: "worthless, except in a deep, rich, sandy soil." Mine are on a clay, and they bear profusely for two or three weeks. They are earlier than *Hovey's*, and in quality better than either of the foregoing; and whatever kinds may be raised for market, it is a most desirable variety for home use. While it lasted we preferred it to all other kinds except *Burr's New Pine*. It is a very hardy and desirable variety.

4. *Burr's New Pine*.—I have cultivated it two years. It has proved to be of the most sweet and delicious flavor, and new beds well watered show fruit most of the season. But it has not produced with me hitherto a full crop, and newly planted beds are easily killed during the winter and are quite as susceptible to injury from the sun in summer, where they are planted in the spring. If as hardy and productive as the foregoing, it would be the most desirable of strawberries. I liked it better last season than I do now. One can hardly form a judgment this year on account of the drouth.

Of those introduced here, the foregoing are the only ones worthy of cultivation.—We have found no other sorts equal to the common wild fruit of our pine woods and old fields. The following have been tried:

5. *Cincinnati Hudson*.—This variety here is only moderately productive, yielding less than either the three first of the list, and is too acid for most tastes. Inferior in quality and productiveness.

6. *Boston Pine*.—Not prolific in fruit and making few runners during our dry summers. It sometimes bears a few fruit the last of October, in wet seasons—but at no time produces much of a crop. Rejected on this account by our cultivators.

7. *Black Prince*.—So far seems unworthy of culture. It is by no means equal to *Burr's New Pine* in flavor, and in bearing produces about an equal crop.

equal to
Boston

Pine, and like that variety, does not throw out many runners, but in foliage and fruit is entirely different.

8. *British Queen*.—Not productive enough to be of any service. Hardly bears enough to test its quality.

9. *Burr's Rival Hudson*—though a hardy and tolerably productive sort, is not worthy of culture when the first three varieties of this list can be obtained.

10 and 11. *The English White*, and *Red Wood*—I cultivate for the singularity of their fruit and foliage. The fruit is agreeable, but not very abundant. The *Red Wood* was the first strawberry to ripen the present year, which was perhaps owing to its position.

12, 13, 14 and 15. *Buist's Early*, *Methuen*, *Victoria*, and *Prolific Hautbois*—were in our garden and some few plants still remain, but no one has thought it worth while to preserve them when other and more desirable varieties are so readily obtained. They have not proved productive with us.

DESTRUCTION OF INSECTS.

BY CHAS. ROBINSON, NEW HAVEN, CT.

Who can estimate the vast extent of insect life, especially in cities? None but the careful cultivator, who takes an honest pride in the health and, of course, the cleanliness of his plants, can at all conceive of the amount and infinite variety of the depredators, to whose attacks they are daily and hourly liable. There is scarce a plant which has less than six or eight special enemies, while of the coccus, worms of numberless variety, and caterpillars of all shapes, colors, and sizes—a whole army is continually striving to destroy our labors and our hopes.

Whence this worse than Egyptian plague, and whence their origin? Their present condition is but one aspect—one phase of their existence; for their propagation and diffusion Nature has provided a separate and distinct life; they are metamorphosed into a new and higher state of being. Moths, millers, and flies, destructive though they may be, are but the representatives and propagators of enemies still more rapacious. Each moth, each miller, and each fly, as a general fact, is the precursor and parent of maggots, worms, and caterpillars innumerable.

What reliance then can be placed upon the efforts of the few birds found in a city for the destruction of these legions?

For many years I have made it a point to destroy forthwith, upon their first appearance, all insects which dared to manifest themselves in my garden. This has caused me no small labor; and the most discouraging feature of the whole is, that during the season of vegetation the work is never done. Some new phase of the annoyance is constantly occurring—some new and more destructive enemy requires constant extermination. I have also provided nests for our various birds, and have fed them until my garden has become the home of the blue bird, the robin, wren, humming bird, oriole, yellow bird, the warbler, and various others of our sweet songsters.

The success of my conflicts with the flies in my house has been more encouraging. By destroying all which first arrived I have been able to keep them, not entirely extinct it is true, but yet somewhat like angels' visits. Since the experiments I am about to detail scarce a fly can be found in my house.

This season I determined not only to destroy all creeping things which should infest my plants and flowers, but also to carry the war of extermination directly into the homes and families of my adversaries. For this purpose I procured twenty-four wide mouthed bottles. They hold nearly a quart each—are hung perpendicularly on the fence around my garden, and are about three-fourths filled with two parts of molasses and one of vinegar. Each evening they are all emptied into a wire sieve (the liquor unconsumed being preserved for further use) and then refilled. All this takes time, as any operation must which has to be repeated twenty-four times; but it is all accomplished by one person, and the flies measured and buried in about twenty minutes—less time than would be required in finger-picking the offspring of any dozen of the millers destroyed.

One fact in reference to this matter is deserving especial notice. If the bottles are emptied and refilled *at evening* a large number of millers of all sizes and kinds will be caught. One morning I counted over fifty caught the previous night, some of them very large, in one bottle. That number as an average, and for aught I know a fair one, would give an aggregate of twelve hundred caught in a single night.

The result thus far has exceeded my expectations. The largest quantity caught in any one day was eight and a half quarts. The average for the last seven days is six quarts—that is, I have actually caught during the last week forty-two solid quarts of millers, beetles, and flies. This result has been attained in my small garden, where constant and thorough measures have been persevered in for years to destroy all insects. How much more might be accomplished in localities where they have been permitted to increase to their full capacity.

Can any one calculate the vast array of depredators, which would have been propagated from these more than five pecks of moths, millers, beetles, and flies. We have in New Haven three thousand and seven hundred dwelling houses with yards and gardens attached, beside our three hundred and sixty stores and one hundred and eighty manufactories. Six quarts from each of these houses would give a daily aggregate of over six hundred and ninety-three bushels, or four thousand eight hundred and fifty-six bushels of solid beetles, millers, and flies, caught in one week.

How much of annoyance and misery to men and animals, and injury to plants and fruit might thus be prevented, and how comparatively slight the labor. Probably more time and labor is now actually expended in this locality in the destruction of the offspring than would in this way be necessary to exterminate the race.

Sometime since you remarked, in answer to a correspondent, that manure buried eight inches deep in the soil was of no value.* That must depend upon the nature and condition of the soil. Where it is light and friable and well worked, the roots, accord-

* We do not remember having made such a statement, and certainly should not wish to be so understood, for we know very well that manure buried eighteen inches instead of eight would be valuable under certain circumstances.

ing to my observation, pervade the whole soil, however deep. In burying the flies I have caught recently among my corn, planted June 7th, I find the ground already full of roots to the depth of over a foot. True my soil is of unusual depth, as I have it carefully dug and thoroughly worked from two feet to thirty inches deep throughout. I find that the roots of my vegetables and plants avail themselves of its whole depth before they arrive at maturity.

[We are glad to see observing men in all parts of the country turning their attention to a study of the habits of insects, and the best methods of repelling their attacks upon vegetation. It is a fact that every year we are called upon to note the arrival of some new enemy to the products of our orchards and gardens, and the cultivator who fails to make himself acquainted with them, and the most successful modes of resisting and destroying them, will find himself as utterly helpless as would a mariner in the trackless ocean without a compass.

We thank Mr. ROBINSON for the account he has given us of his labors. We have seen the same mode of trapping successfully pursued by others, and are satisfied that every individual might do much in their way to relieve their premises from such annoying pests. In this connection we cannot urge too strongly the necessity of the prompt and complete destruction of every fallen fruit. Not a single specimen should be left on the ground over night. Children can do this work as well as men, and it will aid very materially, as we know by experience, in diminishing the number of insect depredators.—Ed.]

PROPAGATION AND CULTURE OF TREES—THE WAY I DO.

BY E. NICHOLS, WOLF-PEN SPRING, NEAR WALHONDING, OHIO.

I HAVE derived great pleasure and profit from the perusal of the writings of those engaged, as I am, in growing fruit trees, whether for sale or in the orchard. Nor has anything that I have seen appeared more practical and useful than your *Fruit Garden*. Still there are many things which I do not do just as I understand others to do in similar cases, and I have supposed it might afford at least some amusement, for me to state briefly the leading points in which my practice differs from that of most or all others. Of course no one will adopt these *strange notions* unless upon the conviction of his own judgment, and I must candidly admit that they have not had those *years* of trial which the cautious cultivator can rely on. They were not practiced by my great grandfather, my grandfather, nor even my own progenitor. I can only say they seem to do well with me.

I grow no trees in my nursery for sale. I plant them all. I have no confidence in what is called *the whole root seedling stock* theory. All thrifty growing trees I prefer, decidedly, upon their own roots. This, in the apple, I accomplish principally by common root grafting and setting the trees well in the ground, by which the grafts gener-

ally take root. An observation of thousands of trees has satisfied me that those trees growing on their own roots are longer-lived than those grafted standard high, and longer-lived and more thrifty than most seedlings. One seedling out of four may be found very vigorous and healthy.

Pears I grow chiefly on healthy sprouts that are easily transplanted, bud freely, and layer readily. In these, at the usual season, I insert from one to a dozen buds, according to the size and vigor of the stalk. These buds are inserted on the same side, one above the other, about five inches apart. At the proper season the stock is trimmed of all limbs and buds but those inserted, and topped, and then weakened by a cut at the ground on the same side the buds are set, and is brought over rather more than half to the ground. Here it remains until the shoots are from three to six inches long. Then a trench is dug three inches deep, and the stock is lipped just below each bud and then brought into the little ditch and fastened there as a layer. If the weather is hot, a little fine leafy brush is put around them. After a few days, when the trees have become accustomed to their new position, I draw in a little fine dirt which I continue from time to time until they are well rooted. This gives the tree its choice between its own root and the root of the stock on which it is budded. Nine out of ten will show a preference in the end for their own roots, though a free-growing stock will generally root first. I will make no argument in favor of this mode of growing trees. I am aware many learned professors call all such worthless trash. I may only say I have seen some of the oldest worn out varieties, of great age, growing on their own roots, with the seeming health and vigor of youth, and that I am quite willing to risk the planting of considerable numbers of them.

When I have once got a good stock of a variety, I can of course dispense with my sprout stocks and grow them directly as layers. Most kinds root without great trouble and grow well. I will only add that I prefer all healthy, vigorous trees on their own roots. I know no tree which I should deem profitable to set out in an orchard which I would not prefer on its own roots. Even the *Early Harvest* and *Sweet Bough* prosper well with me on their own roots. But most of my pear trees of this class are yet small.

In trimming trees in the nursery, and when set out, my later practice is quite *odd*. It is very offensive to the great majority of opinions. I endeavor to grow no nice, pretty, clean, smooth stems, six or seven feet high, that would make a good ramrod. Some, indeed, I run up pretty well, but I rub no buds off, and only pinch the shoots when they have three or four leaves, so that each stock becomes a mass of verdure. As I have practiced this mode only a few years, I can only say it seems to me to promise well. I have not practiced it to an extent which would enable me to give any opinion based on observation, but it is my confident conviction that there can be nothing better to start standard pears on than the quince stock. We know they start vigorously, and also that, if the pear stock is set well under the ground when it is transplanted, it will root freely. Why should not such make the very best standard orchard trees? I have no doubt they will.

It seems to me that in this way we might secure early maturity in bearing, and in

the end the largest and longest-lived trees. Indeed, there seems reason to hope they might be even more likely to live than in any other way. A moderate and sound growth is indispensable in the young pear tree to its health and vigor at mature age. This is secured by first working on the quince; and it is certain that whenever the quince fails to give the pear stock the requisite nourishment, it will root if it is favorably situated. It is as natural as for a man to eat when he is hungry if food is at hand. What say you, Mr. Editor, to starting standard orchard pear trees on the quince?

In another essay, if it is your wish, I will speak of my *oddities* in planting and managing the orchard.

A FARMER I ONCE KNEW.

BY T. M. COOLEY, TOLEDO, OHIO.

I HAVE known in my life a good many farmers of enlarged means, whose sons, after receiving what is commonly called a *liberal* education, invariably deserted the farm and betook themselves to some other occupation, where they were furnished with constant exercise for the mental faculties. It was not always—not often, perhaps—ambitious views, or even the expectation of larger gains that induced them to desert the farm, but *what* it was may, perhaps, be best illustrated by drawing a picture of another farmer I once knew.

This man lived upon a small farm in the State of New York, by the industrious working of which he managed not only to earn a support, but also to lay aside a little as well for an unfortunate day, as to supply his family with intellectual enjoyment. His two sons had received some benefit from schools, but as a collegiate education was expensive, the father resolved to do what he could towards educating them in another mode. As his desire was that they should follow the same occupation with himself, it struck him as of primary importance that he should first interest them in that employment, and then fit them for it. Though it might be very well for them to spend years in acquiring a knowledge of the dead languages, he thought it still more important that they should become intimately acquainted with the various soils, and with the conditions necessary to the healthy growth of trees and crops; and as life is limited, and knowledge infinite, he thought it good policy that they should first devote their time to that which was of greatest practical value.

It would have done you good to witness the interest which his two boys took in the various phenomena of nature to which he directed their attention. No professional student was ever so much delighted with his books, and for the sufficient reason that no other volume ever presented such intellectual feasts as the great book of Nature unfolds. The unchangeable laws of animal and vegetable life upon which every operation in agriculture is based, were daily exhibiting to them new and beautiful illustrations; and whether it was seed-time or harvest, summer or winter, any labor to which their time was devoted, had for them its peculiar interest.

To their surprise they found many things in an occupation six thousand years old, which were still the subject of experiment. The best time for planting trees, the soil, and conditions of soil suited to the different varieties, the best season for cutting timber with its durability in view, the best mode of preserving timber in the ground or out, and a thousand like things appeared still to be subjects of dispute, and though of prime importance, to be receiving little or no attention among their neighbors. The habits of the various insect enemies that destroyed their fruits and ravaged their fields, seemed little understood, and, in fact, these young men were frequently astonished at meeting with owners of large orchards who, though they could see their apples, peaches, and plums being daily destroyed by insects, were utterly unable to tell whether one or forty different species were the cause, and had never given a moment's attention to the habits of those insects, and to means for their destruction. Even the various birds that filled the neighboring woods with their music seemed little known, and some among the most useful of them all, who divided their time between singing and the destruction of noxious insects, were subjects of baseless and ridiculous suspicions in the neighborhood, and were slaughtered without mercy on charges the falsity of which might, with a little investigation, have been demonstrated.

The study of these and of kindred subjects made their labors a constant recreation to them. The daily care of the farm was no longer a task to be performed with machine-like stolidity, while the mind was constantly wandering to other avocations, and indulging in longings for something of a more engrossing nature. The care of trees, of crops, and of domestic animals was a perpetual study, full of interest, and lacking the dullness that pervades the task of the "professional" student, because every day's growth was presenting to their view new phases for contemplation and thought. For the application of the sciences, of the rudiments of which they had made themselves masters, they had frequent occasion, and as their minds expanded with the multiform nature of their practical studies, a taste of general literature crept in to add to the pleasures of their home.

And thus these daily laborers became more thoroughly educated than they would have been by spending years at our higher institutions for public instruction. As that education was of a sound and practical nature, it made them respected everywhere, and their sentiments and opinions won attention in whatever circle they chanced to be. They never had occasion to blush for a want of information on subjects with which men in their calling should be familiar, and they never desired to change their occupation, because they could imagine no other so pleasant as that which made them familiar with the green fields and the graceful trees. I indeed believe that either of them took more pleasure in planting some choice tree, and seeing it grow, and blossom, and bear fruit, than they would have taken in all the various "entertainments" which offer their attractions to the public in large cities.

I can not say that these young men were ambitious; yet, in this calling, they won for themselves credit, and accomplished more good than they would have been likely to at the bar or elsewhere. They were the means, in a great measure, of reforming the system of farming in their vicinity, and of imparting such information as added

greatly to the productiveness of agricultural labor. They rooted out many old worthless fruits, and introduced in their stead such valuable varieties as their neighbors had never dreamed of before. They beautified their own home with trees, and flowers, and tasteful arrangement, and by so doing became the occasion of beautifying the homes of farmers all around them. By acquainting themselves with the habits of destructive insects, and devising means to prevent their ravages, by originating new and valuable fruits, and by improvements in agricultural implements, they became public benefactors in a wider sphere, and had the satisfaction of seeing the whole country in some degree the better for their labors. Though they never became rich, they were the masters of a competence, and their hospitable home and intelligent conversation attracted the most intellectual society for a large region about them. And although such a thing as an agricultural publication had rarely been heard of in their vicinity when they were boys, scarcely a family is now without one, and I doubt not that the *Horticulturist* is at this time well appreciated and extensively taken in their neighborhood.

I have sometimes thought that if some other farmers I know were to bestow a little attention upon the career of these two young men, they might perceive at once the reason why so many among the most bright and enterprising of farmers' sons seek some other occupation, so soon as they are at liberty to do so. Where the mind is not interested, the hand disdains to labor. He who teaches his sons to work as he would teach the unreasoning ox to bear the yoke, must expect the restless mind to long for that activity elsewhere, which he neglects to incite in his own employment.

VINE BORDERS.

BY ROBERT MESTON, GARDENER TO A. J. POLK, NASHVILLE, TENN.

IN the July number of the *Horticulturist*, page 311, Mr. CLEVELAND says: "A controversy has arisen of late years relative to the use of slaughter-house manure, carcasses of animals, &c., as a material in the composition of vine borders." Now, sir, I would respectfully ask Mr. C., if, after nine years experience with his border, composed of sods, shoe makers' chips, oyster shells, and all the bones and carcasses he could get hold of, whether he has succeeded in growing better grapes than his neighbors who have not had the advantage of the same material? If he has, the controversy is ended and every practical gardener will be glad to avail himself of Mr. C.'s experience. But on the contrary, I believe it is the opinion of the majority of practical gardeners that animal matter is not necessary as a material in the composition of vine borders; for this reason the best grapes grown in England and America are produced without its aid. Then, if this is true, where is the economy of using a material that is more expensive to obtain, and, when obtained, is two or three years before it is of any material use to the vine, even supposing it is not injurious while in the state of decomposition. Mr. C. says, "the best authorities I have seen in favor of the practice, do not recom-

mend a direct application of such material to the roots of a growing vine, but only that it should be placed where the roots would find it when it was properly decomposed and fit for their use." Here is an acknowledgement from Mr. C., and the authors he quoted, that animal matter, in a decomposed state, is not fit food for a vine. Then why apply it? I have no objection to animal matter, when properly decomposed, forming a part of the material that is to compose a vine border, as I believe it is good strong food for vines when properly used; but I object to burying whole carcasses to decompose in a vine border, and, when decomposed, to lay them in a bulk. This is my reason: At the time of the decomposition of the carcass, the ground becomes impregnated with the effluvia arising from this mass of animal matter, and renders the ground so affected incapable of sustaining the roots of a vine.

But, according to Mr. CLEVELAND, roots have the power of selection, always seizing upon anything valuable, or to stop short if they meet with any injurious matter. Here I must plead ignorance as it regards the stopping short; do they cease growing, or do they turn around and go another way? or do they mount the beast and get rode to death? Now, as far as my experience goes, they neither stop short or go around, but continue in a straight course without any power of selection. If this is not so, why do we turn up dead roots in a vine border in the neighborhood of unwholesome matter, caused by the decomposition of dead carcasses. I have never seen an instance yet where good wholesome vegetable compost was used in the formation of a vine border, that it ever had to be taken out, or the vines become unhealthy; but twice I have seen all the compost taken out of vine borders where green slaughter house manure had been used in making the borders, and three years lost to the growth of the vine. Mr. C. likewise says, "experience is the best teacher." That I admit; and I must say that my experience teaches me never to use animal matter in the formation of vine borders but in a decomposed state, then to be thoroughly incorporated with the rest of the material. This is the only way, in my opinion, it can be used with safety.

"But," says Mr. C., "my vines have done well—they never have been troubled with indigestion or dyspepsia." That may be true; but they might have done better if there had been no green animal matter in the border. We have here a living proof of the truth of your note to Mr. C.'s letter, where you say that good grapes and heavy crops can be obtained without dead carcasses.

I must here state, that in April, 1851, we commenced the building of two vineries, each 50 feet long. These are lean-to houses, with good flues, cisterns, and every other convenience; the front wall and the foundation of the flues being on arches, giving the vines a space of 50 ft. by 30 ft. to grow in. The borders have been walled, paved and drained; floor, 14 ft.; back wall, 16 ft.; front, 2 ft.—giving a rafter of between 19 ft. and 20 ft. The borders are made as follows: the top spit from where the houses now stand, which would be 1500 cubic feet of good maiden soil, about twenty wagon loads of charcoal to each border, leached ashes, lime, rubbish, and stable manure, with about twenty loads of leaf soil from the woods, the whole being well incorporated. There is not a bone or any animal matter in these borders, and yet

here are as good vines as ever revelled in the carcass of a dead horse. I have bunches of grapes from 2 lbs. to 4 lbs. weight. The largest of the vines are $4\frac{1}{2}$ in. around a foot from the ground, and berries of the *Cannon Hall Muscat* $3\frac{3}{8}$ in. around and not yet ripe. Mr. RIVES, of Louisville, saw these grapes this spring and pronounced them to be the finest vines he ever saw, and that I had more grapes on six of these vines than he had in a house of eighty feet that had been planted four years. This was after they had been thinned. I give this statement as a proof that good grapes and heavy crops can be grown without dead horses.

[We thank Mr. MESTON for the very instructive account he has given us of his successful grape culture. There is not, however, a wide difference of opinion between him and Mr. CLEVELAND. Both admit the necessity of animal matter (dead carcasses) being in a decomposed state before the roots of the vines reach it or can derive benefit from it. That roots of vines or any other living plant will soon perish in contact with *fresh* animal substances, no one can doubt.]



Foreign Notices.

THE GIANT LILY—*Lilium giganteum* of WALLICH; *Lilium cordifolium* of DON.—This magnificent Lily has been one of the chief novelties at the late English shows; we trust it will soon find its way across the water. We believe it will be sufficiently hardy for open ground culture in our middle and southern States, at least; but even if it requires greenhouse protection, it will be a great acquisition. Only imagine a Lily ten feet high, with leaves ten to twelve inches long, and eight inches wide, "with white flowers proportionably large and delightfully fragrant!" We quote the following account of it from "*Paxton's Flower Garden* :

"The discovery of this Prince of Lilies we owe to Dr. WALLICH, who detected it in moist shady places on Sheopore in Nepal. 'This majestic Lily,' he says, 'grows sometimes to a size which is quite astonishing; a fruit-bearing specimen of the whole plant, which is destined for the Museum of the Hon. East India Company, measures full ten feet from the base of the stem to its apex. The flowers are proportionably large and delightfully fragrant, not unlike those of the common white Lily.' Nor does it degenerate in cultivation; the flowering plant having attained a height of ten feet in one season; the flower portion occupying twenty inches. Such a raceme of flowers, accompanied by leaves measuring ten to twelve inches long and eight inches broad, must have afforded a striking spectacle. Baron HÜCKL found the plant in the Peer Punjäl pass of the Himalaya, leading into Kashmeer; and we believe that Drs. THOMPSON and HOOKER met with it abundantly in other portions of that vast range of hills. The remainder of our account shall be taken from Dr. BALFOUR's notes, chiefly drawn up from the living plant at Comely Bank near Edinburgh. Major MADDEN says the *Lilium giganteum* is common in the damp thick forests of the Himalaya, the provinces of Kamaon, Gurwhal, and Busehur, in all of which he has frequently met with it. It grows in rich black mold, the bulb close to the surface, at from 7500 to 9000 feet above the level of the sea, where it is covered with snow from November to April, or thereabout. The hollow stems are commonly from six to nine feet high, and are used for musical pipes. The fruit ripens in November and December. Stem straight, cylindrical, smooth, gradually attenuated to the apex, nearly ten feet high, five and a half inches in circumference at the base, green, with a reddish-purple hue at the upper part. Leaves alternate, scattered, the internodes varying in length, petiolate, broadly ovate, cordate, acuminate, shining dark green above, paler below, venation reticulated, having an evident midrib, with the veins coming off from it ending in an intra-marginal vein; lower leaves with long petioles, very large, ten to twelve inches long, eight inches broad, becoming gradually smaller in ascending; upper leaves small, sessile, ovate, acute. Petioles of lower leaves twelve to fourteen inches long, thick, broad, and somewhat sheathing at the base, lower surface convex, upper with a deep and broad furrow; petioles of upper leaves short. Bracts ovate, acute, caducous, leaving a semilunar scar. Flowers white, with purple heaths, greenish below, infundibuliform-campanulate, inclined downwards, twelve on the raceme, fragrant; tube greenish, two inches in circumference at the base, gradually dilating upwards; limb slightly revolute; leaves of the perianth oblong-spathulate, three outer with slight purple streaks inside, three inner rather broader, with a deep purple tinge on the inside, and with a prominent ridge on the outside, sulcated on either side, and two elevated ridges on the inner surface separated by a shallow groove.'—*Bot. Mag.*, t. 4673. There is great reason to hope that this noble plant, of which Messrs. VERRILL have raised an abundance, will prove hardy. At least it can require nothing more than a covering of ashes in winter."

SAXE-GOTHEA CONSPICUA.—This remarkable plant, to which His Royal Highness Prince ALBERT has been pleased to permit one of his titles to be given, and which will probably rank among the most highly valued of our hardy evergreen trees, is a native of the mountains of Patagonia, where it was found by Mr. WILLIAM LOBB, forming a beautiful tree 30 feet high. In the nursery of Messrs. VERTCH, of Exeter, it has lived in the open air for four years without shelter, and has all the appearance of being well adapted to the climate of England. The country in which it grows is, indeed, more stormy and cold than any part of Great Britain, as is shown by the following account of it, given by Mr. LOBB in one of his letters to Messrs. VERTCH :

"During my absence I visited a great part of Chiloe, most of the islands in the Archipelago, and the coast of Patagonia for about 140 miles. I went up the Corcobado, Caylin, Alman, Comau, Reloncavi, and other places on the coast, frequently making excursions from the level of the sea to the line of perpetual snow. These bays generally run to the base of the central ridge of the Andes, and the rivers take their rise much further back in the interior. The whole country, from the Andes to the sea, is formed of a succession of ridges of mountains gradually rising from the sea to the central ridge. The whole is thickly wooded from the base to the snow line. Ascending the Andes of Comau, I observed from the water to a considerable elevation the forest is composed of a variety of trees, and a sort of cane so thickly matted together that it formed almost an impenetrable jungla. Further up, among the melting snows, vegetation becomes so much stunted in growth, that the trees, seen below 100 feet high and 8 feet in diameter, only attain the height of 6 inches.

"On reaching the summit no vegetation exists—nothing but scattered barren rocks which appear to rise among the snow, which is 30 feet in depth, and frozen so hard that on walking over it the foot makes but a slight impression.

"To the east, as far as the eye can command, it appears perfectly level. To the south, one sees the central ridge of the Andes stretching along for an immense distance, and covered with perpetual snow. To the west, the whole of the islands, from Guaytecas to the extent of the Archipelago, is evenly and distinctly to be seen.

"A little below this elevation the scenery is also singular and grand. Rocky precipices stand like perpendicular walls from 200 feet to 300 feet in height, over which roll the waters from the melting snows, which appear to the eye like lines of silver. Sometimes these waters rush down with such force, that rocks of many tons in weight are precipitated from their lofty stations to the depth of 2000 feet. In the forest below everything appears calm and tranquil; scarcely the sound of an animal is heard; sometimes a few butterflies and beetles meet the eye, but not a house or a human being is seen. On the sandy tracts near the rivers, the lion or puma is frequently to be met with; but this animal is perfectly harmless if not attacked."

It is from this wild and uninhabited country that many of the fine plants raised by Messrs. VERTCH were obtained, and among them the *Saxe-Gothæa*, *Podocarpus nubigena*, *Fitz-Roya Patagonica*, and *Libocedrus tetragona*. Of these he writes thus :

"The two last (*Fitz-Roya* and *Libocedrus*) I never saw below the snow line. The former inhabits the rocky precipices, and the latter the swampy places between the mountains. The first grows to an enormous size, particularly about the winter snow line, where I have seen trees upwards of 100 feet high, and more than 8 feet in diameter. It may be traced from this elevation to the perpetual snows, where it is not more than 4 inches in height. With these grow the Yews (*Saxe-Gothæa* and *Podocarpus nubigena*), which are beautiful evergreen trees, and, as well as the others, afford excellent timber."

SAXE-GOTHEA may be described as a genus with the male flowers of a *Podocarp*, the females of a *Dammara*, the fruit of a *Juniper*, the seed of a *Daerydium*, and the habit of a Yew. Its fleshy fruit, composed of consolidated scales, enclosing nut-like seed, and forming what is technically called a *Galbulus*, places it near *Juniperus*, from which it more especially differs in its anthers not being peltate, nor its fruit composed of a single whorl of perfect scales, and its ovule having two integuments instead of one. In the last respect it approaches *Podocarpus*, and especially *Daerydium*; but the exterior integument of the seed is a ragged abortive membrane, enveloping the base only of the seed, instead of a well-defined cup. In a memorandum in my possession, by Sir WILLIAM HOOKER, I find the distinguished botanist comparing *Saxe-Gothæa* to a



FIG. A. BRANCH OF SAXE-GOTHEA CONEPICUA.

Podocarp with the flowers in a cone—a view which he was probably led to take by the condition of the ovule, and which may be regarded as the most philosophical mode of understanding the nature of this singular genus; to which *Nageia* may be said to be a slight approach, and which is not distinguishable by habit from a Podocarp.

In its systematic position *Saxe-Gothaea* possesses most interest, forming as it does a direct

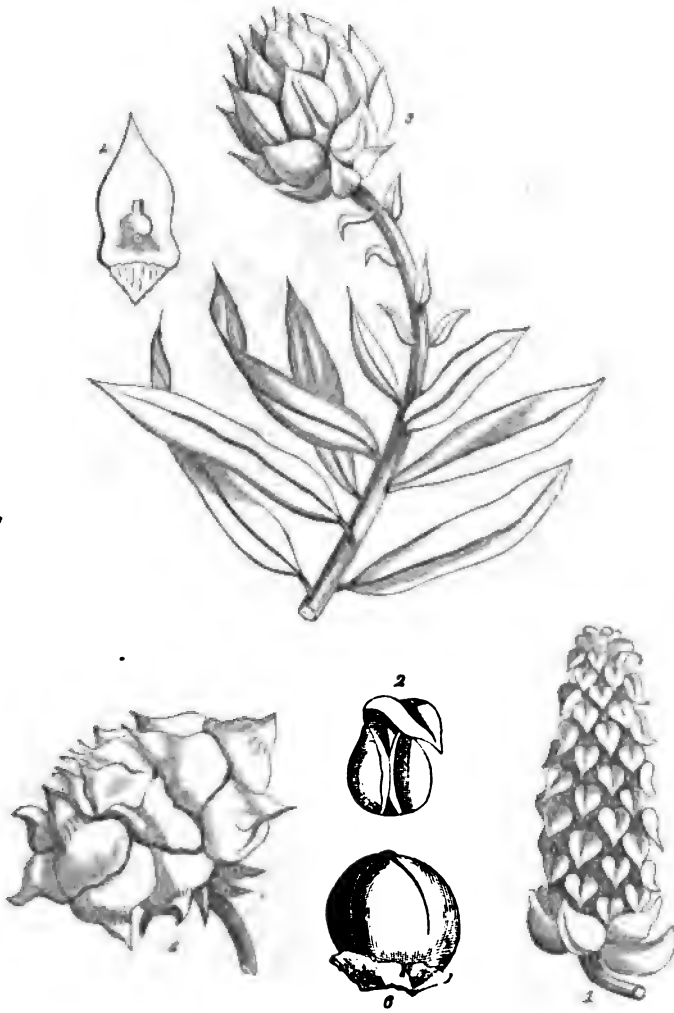


Fig. B. FRUCTIFICATION OF SAXE-GOTHÆA.

transition from the one-flowered *Taxads* to the true imbricated *Conifera*, without, however, breaking down the boundary between those orders, as I understand them, but rather confirming the propriety of limiting the *Coniferous* order to those genera which really bear cones instead of single naked seeds. In the language of some naturalists, *Saxe-Gothæa* would be called an osculant genus between *Taxads* and *Conifera*.

The leaves of this plant have altogether the size and general appearance of the English Yew, *Taxus baccata*; but they are glaucous underneath, except upon the midrib and two narrow stripes within the edges, which are a pale green. The male flowers consist of spikes appearing at the ends of the branches, in a raceme more or less elongated. These spikes (fig. B. 1) grow from within a few concave acute scales, which form a kind of involucre at the base. Each male is a solitary membranous anther, with a lanceolate, acuminate, reflexed appendage, and a pair of

terminal, scaly imbricated cone (fig. B. 3). The scales are fleshy, firm, lanceolate, and contracted at their base, where they unite into a solid center. All appear to be fertile, and to bear in a niche in the middle, where the contraction is a single inverted ovule (fig. B. 4). The ovule is globular, with 2 integuments beyond the nucleus; the outer integument is loose and thin, and wraps round the ovule in such a way that its two edges can not meet on the underside of the ovule;* the second integument is firm and fleshy; the nucleus is flask-shaped, and protrudes a fungous circular expansion through the foramen. The fruit (fig. B. 5) is formed by the consolidation of the free scales of the cone, into a solid fleshy mass of a depressed form and very irregular surface, owing to many of the scales being abortive, and crushed by those whose seeds are able to swell; while the ends of the whole retain their original form somewhat, are free, rather spiny, and constitute so many tough, sharp tubercles. The seed (fig. B. 6) is a pale brown, shining, ovate, brittle nut, with 2 very slight elevated lines, and a large irregular hilum; at the base it is invested with a short, thin, ragged membrane, which is the outer integument in its final condition. The nucleus lies half free in the interior, the fungous apex having shrivelled up and disappeared.

Explanation of the Cuts.—A, a branch with male and female flowers, natural size; B, various details of the fructification, more or less magnified; 1, a spike of male flowers; 2, a male or anther part; 3, a twig and young cone; 4, a scale seen from the inside with the inverted ovule, showing the fungous foramen protruding beyond the primine (outer integument); 5, a ripe fruit; 6, a seed showing the 2 slight elevations upon the surface, and the remains of the ragged primine at the base.—*Journal London Horticultural Society.*

THE RECENT FLOWER SHOW AT PARIS.—The Société d'Horticulture de la Seine held its show in the Champs Elysées, on the 9th inst., and four following days. To give more *éclat* to this exhibition, England, Germany, and Belgium were each invited to send a judge: Mr. RIVERS, of Sawbridgeworth; Mr. BOOTH, of Hamburg; and M. MILLEZ, of Lisle, were the three representatives chosen. The show, as compared with those held in England, was a small affair; but the way they manage these matters in France may be of some interest to your readers, and it will therefore be as well if I give the words of one of the "jurors" (the judges are here called a jury), as follows:

"Our letter of invitation told us that we must meet at the house of M. DROUART, Rue Faubourg St. Honoré, at 10 o'clock precisely on the 8th inst. I accordingly made my way there, and found a room full of amateurs, with a few gardeners and nurserymen; by 12 o'clock all had assembled, and we then proceeded to the Champs Elysées, to the tent erected so as to enclose one of the fountains on the left hand of the avenue, about 200 yards from the Place de la Concorde. After some discussion, and after each of us signing our names in a book, 24 judges, or as they say here a 'jury,' of that number were selected; to each was given a silver medal, a free card of admission, and a note of invitation to a 'grand banquet' at the Trois Frères Provençaux, at seven in the evening; we then proceeded to business. The show of flowers and plants was, as near as I could judge, about one-third the extent of those held at Chiswick and the Botanic Garden; the tent was about 80 yards long, and 80 wide, and well filled with plants in groups, on raised beds of earth, turfed at the sides; no specimens were to be seen, but all, or nearly all, were such plants as we see in our nurseries for sale; so that, although the show was pretty enough, there was nothing individually interesting, as in our grand specimens of Orchids, Indian Azaleas, and others. The jury of 24, after some discussion, was divided into two parties of 12 each, one headed by the Marquis de Barthélemy, the other by the Abbé Berlèze. From 12 o'clock to 6 how we did talk and hold up our heads, and put them down again, and then more talk, and then the prize was awarded or withheld, according to the show of hands; our work, compared to our talk, was

* Since this was written, Sir W. HOOKER has placed in my hands a sketch of the anatomy of the female flowers of *Saxe-Gothaea*, by Mr. B. CLARKE, who describes the ovule thus: "Its ovule has the same structure as that of *Gnetum*, as described by Mr. GRIFFITH, viz.: It has 3 integuments; the internal protrudes, and forms a sort of stigma, not so obvious as in *Gnetum*; the external has constantly a fissure on its posterior, or rather inferior surface, which, however, does not close as in *Gnetum* when the ovule advances in growth, nor yet become annelent. Mr. GRIFFITH describes the fissure in the external integument of *Gnetum* as constantly posterior; and if the ovules of the strobiles were erect, they would come with *Gnetum* in this particular."

something like FALSTAFF's bread and sack, but at 6 P. M. we had finished; yes, after six hours' talk, we 24 had awarded all the prizes, and the abbé, in an eloquent speech, thanked us. The banquet at 7 was attended by perhaps 150, Comte de Cazes in the chair; there was again an immensity of talk, much heat, a very few strawberries for the dessert (about five for each person), and some champagne. Our chairman (I suppose it is not the fashion here) did not give either a toast or a speech, nor any one else. At 9 all rose from the table, and the proceedings of the day terminated. I visited the show the next day, the 9th; this was a select day; the price of admission five francs; the attendance was, however, very thin, for not more than 300 or 400 visitors were present. There were two or three stands of cut Roses in glass bottles; the blooms were inferior, for the season here is very late, and but few Roses are in flower. At the entrance was a nice group of Chinese Pæonies, in large pots; these were, perhaps, the most showy plants of the whole exhibition. Two or three collections of Roses in pots, standards and dwarfs, were pretty, but as compared with the pot Roses of the shows in England they were nothing; they were mostly in 8-inch pots, and it was surprising to see them so healthy in pots of such small dimensions. Mr. STANDISH exhibited a box of bloom of his new Mount Pæonies, which obtained a prize; he was also awarded two other prizes, one for *Viburnum macrocephalum*, and for *Sikkim Rhododendron*. A group of hardy Azaleas, small plants in small pots, was gay, as was also a group of Indian Azaleas; there were three or four collections of Coniferous trees and shrubs, but no large specimens; these included young plants of some of our newly introduced species. A large collection of hardy shrubs, deciduous and evergreen, in pots, was rather interesting, and perhaps worthy of imitation, as it brought under the eye many species but little known, yet worthy the attention of those forming gardens. The Pelargoniums were principally fancy varieties; as groups they were pretty, but I did not see one worthy a second look. The Rhododendrons, in two or three collections, were not worth a thought or a word—the plants were small, and the sorts of a very common description. The Calceolarias were very inferior. The fruit consisted of three or four plates of Strawberries, sorts from seed, and a dozen or so in pots; some Apples, two or three bunches of poor Grapes, a few Melons and Nectarines, the latter I understood came from England. This part of the show was badly arranged, and not at all attractive. On Friday, Saturday, Sunday, and Monday, the price of admittance was reduced to one franc, the attendance was still thin, for I should think there was never more than 300 to 400 at one time in the tent. It was singular to find persons belonging to the Society hawking and calling your attention loudly to the catalogues (1½ franc each), giving the names of the plants, and to whom the prizes were awarded. I paid the exhibition a parting visit just before it closed on Monday; the weather had been cool, and the plants were still quite fresh, except the cut flowers, and the whole, with the large fountain playing in the center, had a pretty effect. I had nearly forgotten the vegetables. There were Cabbages and Lettuces pretty good, but it is in winter vegetables that the French excel; in summer Lettuces, Cauliflowers, &c., we beat them hollow. A bunch of Asparagus from Autenil was, however, remarkable; many of the sticks measured from 4 to 5 inches round, and from 12 to 14 inches long. A tent and yard attached to the show was filled with garden implements, garden chairs, fountains, models of fruits in composition, very well executed, &c. As far as I could judge, these flower shows are not the fashion, neither do they appear to suit the taste of the Parisians; they are too quiet: there is no music, no eating and drinking, and, above all, no noise, which seems an absolute necessity with the French.—*An English Looker-on, in Gardeners' Chronicle for June.*

HORTICULTURAL EXHIBITION AT CHISWICK, JUNE 11.—The *Gardeners' Chronicle* says:

"The second meeting of the Horticultural Society took place last Saturday, at Chiswick. The day was one of the best possible in England: the sun shone brightly but fitfully, the flowers sparkled, and the air, as it warmed, was filled with their fragrance; while the still unsullied verdure of the gardens, which had now acquired its full development and deepest tone, formed the richest possible frame to the brilliant picture. The number of visitors was 7044, among whom was as usual a very large number of persons of distinction.

"The greatest novelty was a dark-green evergreen bush, called *Philesia buxifolia*, imported

from South Chili, by Messrs. VENTON. It was just producing, for the first time, its crimson bell-shaped flowers, which promise to render it a valuable acquisition, if, as is believed, and as it has proved at Exeter, the plant should be found perfectly hardy. There was also a pretty New Holland *Oxylobe* from Messrs. OSBORNE & Co, of Fulham, and one or two other plants of minor note.

Roses were in perfection; no longer, however, small straggling bushes, as they have usually been, but stately, erect specimens, loaded with flowers, as if in the open ground. Green-house and stove plants were still defective as regards variety and novelty, but as examples of cultivation unsurpassable. A *Coleonema rubrum*, from Mrs. LAWRENCE, was especially admired for graceful form, and the most ample development. Examples, too, of Heath, were not uncommon, which 20 years since would have been believed to be fabulous. As to Orchids, we have exhausted ingenuity in the endeavor to find sober terms expressive of their beauty, and we can only now declare that they leave nothing to be accomplished by mere cultivation; one of the *Saccolabes* was a living fountain, gushing with streams of glittering blossoms.

"The fruit-growers have evidently decided upon showing that they are not in skill behind their floral competitors in any branch of their art except Pine Apples, none of which call for remark. The Grapes were quite admirable; and no such Strawberries as those from Mr. SMITH, of Twickenham, have been seen since the day when the Speaker of the House of Commons astonished the world by the produce from his garden at Heckfield. Never up to the present time had such Muscats been shown in June as came from Mr. PERO's place in Suffolk; they would have been regarded as very fine specimens for October. Nor should the Frontignans or Black Hamburgs and the Grapes in pots be passed over without special mention in this place.

"Upon looking at the entries on this occasion, we find that 79 persons produced 185 different subjects of exhibition, and that 124 medals were awarded; so that it would appear as if each exhibitor received rather more than a medal and a half; or, if we express the result in money, that about 320*l.* were given away in prizes, so that each exhibitor received something more than 4*l.* But this is very far from the fact; the number of exhibitors receiving prizes having been in reality 64, and 15 having been nowhere. Nor can any useful average of the sums received by each be struck, in consequence of the great variety of medals contended for and won. For instance, one exhibitor, (Mrs. LAWRENCE) gained 7, one (Mr. TAYLOR) 6, one (Mr. GREEN) 5, five 4 each, seven 3 each, and sixteen 2 each. And the value of the prizes was as different as the numbers, one exhibitor (Mrs. LAWRENCE) having gained 48*l.*, and two of the double prize men only 2*l.* 5*s.* And so it must always be; great winners, small winners, and losers making up all such competitions.

"Roses in pots were again shown in admirable condition. Messrs. LANK, to whom the first prize was awarded, produced Coupe d'Hebé, in the form of a stately pyramid, nearly five feet high, and covered with perfect blooms; associated with it was also the beautiful Souvenir de la Malmaison, large and fine, though slightly past its best; Queen was in perfection, and Magna rosea was nearly as tall and fine as the Coupe d'Hebé just mentioned. Others consisted of Chénédolé, Duchess of Sutherland, Paul Perras, and other favorite sorts. Mr. FRANCIS produced good specimens of Juno, a hybrid China, with delicate pink blossoms, having a rosy center; Coupe d'Hebé, Chénédolé, Baronne Prevost, Comte Boubert, General Allard, Paul Perras, La Reine, and La Pactole. The latter had been fine; but having been long in blossom, its beauty had become a little tarnished. The blooms of La Reine were large and showy, but somewhat confused, a fault to which this variety is liable. In Messrs. PAUL's group we remarked Great Western, a fine Rose, but apt to show a green eye; Blaire No. 2, Caroline de Sausal, a new and beautiful kind, with delicate pink flowers, having a rosy center; Madame Legras, a good white, and others were furnished in good condition. In the amateur's class a fine group was contributed by Mr. TERRY, in which were well-bloomed plants of Baronne Prevost, Blaire No. 2 (scarcely out enough), Chénédolé, Elise Sauvage, Coupe d'Hebé, Paul Perras, Lamarque, Sophie de Marceilly, Tromphe de Laqueue, Bongère, and Niphetos. A collection from A. ROWLAND, Esq., comprised Coupe d'Hebé, in great perfection; Augustine Mouchélet, a pretty rosy crimson kind; Auguste Mia, Paul Ricaut, a very fine rose; Baronne Prevost, in capital order; and the yellow Vicomtesse Decazes. Mr. FRANCIS received a silver Knightian Medal for a nice collection on Manetti

sorts. Mr. TERRY and Mr. BUSBY showed each 25 varieties of cut Roses, which, notwithstanding the heat of the day, kept in good condition, and were much admired.

"Novelties consisted of the crimson bell-flowered *Philexia buxifolia*; *Lilium giganteum*, a fine specimen; an *Ixora*, very like *Bandhuca*; and a piece of a coarse white-flowered Umbellifer, called 'Gulper,' which was stated to be a persian drug used in all Indian pickles, to give their peculiar flavor, from Messrs. VERTCH; an orange-flowered *Oxylobe*, from Messrs. OSBORNE, of Fulham; *Dictyanthus Pavoni*, and a purplish-blue *Scutellaria*, from Messrs. E. G. HENDERSON, Wellington Road; and the Warrea discolor and Lady's Slipper, &c."

BEDDING ROSES.—One of the first essentials in a bedding Rose is, that it should stand well up on its foot-stalk. For a pole or climber the reverse of this would, of course, be the most graceful; one is to be looked down upon, the other up at. If this is remembered, the value of such qualities in their respective adaptations will at once be recognized. However abundant or prolonged a bloomer a Rose may be, if it droops its flowers, half its effect in a bed is entirely lost. And if a shower of rain falls, the accumulated moisture, acting by its weight on the feeble foot-stalks, increases the evil. A bed of such Roses can never give satisfaction. Scrambling Roses, to be pegged down during their season of growth, do not make the kind of effect in beds that one could wish. I would have all worked plants, selecting them with different heights of stock, to suit the different positions in planting; the dwarfier on the outside, the taller in the center. I should not expect great results the first season of planting. During that period I should have an eye to the formation of the head, endeavoring to extend it horizontally as much as possible. When once the surface of the bed becomes over-arched with good flower-bearing wood, and the luxuriance of the plants is checked, supposing the kinds of Roses to be suitable, nothing in the way of massing could be more beautiful. This may be inferred from the effects of a single head of a free-blooming standard of any kind. To get good beds some little time must be consumed in the preparation. One must not be impatient. Young and luxuriant plants will never realize all that is expected of them. But there is no reason why the necessary preparation should take place in the flower-garden. The reserve-ground is the proper place for preparation, and Roses may be prepared there as well as in the beds in which they are to flower. Suppose two seasons' probationary treatment is required, they can there be attended to, and transplanted in full condition to their allotted beds in the garden. To treat Roses as ordinary bedding plants, and selecting from them at random, must ever end in partial disappointment; and from not giving the subject due consideration, and taking the necessary precautions, doubtless arises most of the disappointment in this branch of gardening.—*G. L., in Gardeners' Chronicle, London.*

NEW PELARGONIUMS AT REGENT'S PARK SHOW.—Of seedlings, there was a considerable number. The medal for the best scarlet was awarded to Mr. HOYLE, for *Regalia*, a flower brighter than any other yet exhibited, and of good form; it is also much freer than scarlets generally. Among other seedlings from Mr. HOYLE we noticed *Zeno*, a large even flower, of good shape, dark top, with rosy bottom petals, and clear white center; *Carlos* is another of this class, but darker in the top, and larger—a noble flower for exhibition. *Nonpareil* has the best shape and is the freest bloomer of all the spotted kinds, being large and very smooth. *Eugenia*, another of this showy class, is well marked, and also of good shape. *Rival Queen* is warm orange rose, with clear white throat; large, and a free bloomer. *Majesty* has black top petals, margined with rosy purple; lower petals light, throat clear white; a very large flower. Mr. TURNER exhibited two seedling whites, free bloomers, and of good shape. Also *Astarte* and *Una*; these were raised by W. HOCKEN, Esq. *Duchess of Wellington* appeared to be a good stout flower, darker, and of better shape, but as free as *Constance*, which it resembles in habit. *Pilot* is a bold free crimson scarlet. Others were of less note.—*Gardeners' Chronicle, London.*

Editor's Table.

THE CURCULIO.—There is, after all, *some* prospect of discovering an effectual remedy for the curculio. The Hon. JAMES MATHEWS, of Coshocton, Ohio, from whom we had a communication on this subject last winter, writes as follows:

"I have been experimenting thoroughly this season on my discovery of last year of what I then supposed to be a remedy for curculio. I have applied remedies based upon three separate theories, suggested to my mind by my experiment of last season. All have failed but one, which has proved successful beyond my most sanguine expectations. I have saved the fruit on five plum trees and one apricot tree. Last year was the first that I raised a dozen plums in my garden, and I never saved an apricot till this season. I had destroyed all the trees of those which I had, on account of the supposed impossibility of saving the fruit, except one tree of the *Black* apricot, on which I now have perfect fruit, ripe, not one of them having been stung since I applied my remedy. I am now satisfied that I have found a sure and easy remedy, and all who see the crop of fruit that I now have are likewise convinced. The trees on which I have saved the fruit, are one *Green Gage*, one *Yellow Gage* (Prince's), one *Caledonian*, one *Knight's Green Drying*, one *Royal Hative*, and one branch of *Kirk's Purple*, from a bud of four years' growth on my *Black* apricot. I shall have several bushels of perfect plums. In order that my remedy may be more thoroughly and satisfactorily tried and demonstrated, if it be efficient, I shall submit it to horticultural committees, in some of the States, next spring, with *specific* instructions. One of these shall be New York; and if they report favorably, I shall then make it public, with all my observations of this insect for the last year, which I think will bring to light some new theories and new developments heretofore unknown and un-thought-of, in relation to the character and habits of this enemy.

"Having, however, spent so much time, labor and investigation, to discover the remedy, (if it prove to be effectual when put fairly to the test,) I may not give the matter full publicity until horticultural societies in the country feel interest enough in the matter to offer such premiums as a discovery of this character may merit. I shall plant an orchard in the spring, of plums, nectarines, and apricots, with full confidence that I have nothing further to fear from the depredations of curculio."

We may state in this connection, that for several years we had abundant crops of plums without any other remedy than shaking the trees and destroying promptly all punctured fruit.

LIME AND SULPHUR VERSUS THE CURCULIO.—This is the third season that I have been successful in destroying the eggs of the Curculio after they were deposited in the fruit, and I therefore do feel assured that the compound used by me is an effective remedy, (found in Vol. VII, page 432.) I strongly recommend its general use, and if it is thoroughly applied I have no doubt that in a few years this vexatious little beetle will no longer be considered a pest, but rather as a welcome visitor, to aid the trees in throwing off part of their crop, in order that those which are left behind may be better grown, and more finely ripened. THOS. W. LUDLOW, JR.—*Yonkers, Westchester county, N. Y.*

THE FARMERS, GARDENS, AND LADIES OF NORFOLK COUNTY, MASS.—A correspondent of the *Boston Herald* thus speaks of the gardening operations, ladies, &c., of Norfolk county. He seems to have overstepped the bounds of sober prose, but this is to be expected on such a subject:

"Among our agricultural friends, notes of preparation are sounding in all directions. For amusement and recreation we have of late preambulated many of the towns in Norfolk county. The farmers commence the spring campaign under unusually favorable auspices. Vegetation is opening before us in the similitude of locomotion; the blossoms of the Peach, Cherry, and the Plum indicate that Providence is preparing for us an abundance of the most luscious fruit. The ladies (dear creatures and charming souls) have, in good earnest, pitched into their tulip and dahlia beds; they are up with the lark, and down with the noon-day sun. In the cultivation of flower gardens they not only exhibit excellent taste, but from the exercise consequent thereon, expand their mind and improve their health—that great desideratum with the sex. If your city 'young bucks' have a desire to behold just the prettiest misses out, fresh from the mint and harmless as doves, let them (we do not mean your 'dandy Jims') arise with the sun, and with the *team* nature has given them (their feet and legs), walk into Norfolk county, and from Dorchester to Quincy, and from Quincy to South Weymouth (if they are not too lazy to walk thus far), and they will find females, with their pink bonnet and hoe, out in almost every garden, and will be convinced why and wherefor our Norfolk county ladies are so much admired for their glowing health, ruddy cheeks, matchless forms, and amiable dispositions.

"Our young misses are now so universally educated, that to speak within bounds, at least, in Norfolk county, ninety out of one hundred are competent and qualified 'school marns'—are well skilled, and have a practical knowledge of house-keeping, and all the appurtenances thereunto belonging. Many of them understand their rights, and knowing them, dare maintain them.

"The two most extensive and princely farmers in Norfolk county are, unquestionably, Hon. BENJAMIN V. FRENCH, of Braintree, and Hon. MARSHALL P. WILDER, of Dorchester. Both of them are alike distinguished in political and agricultural spheres. Hon. Mr. FRENCH was a member of the Executive Council under Gov. MARCUS MORTON. Hon. Mr. WILDER was late President of the State Senate under Gov. BRIGGS. They are both merchants as well as farmers. No person without a merchant's revenue can carry on, with the perfection of these gentlemen, and on so extended a scale, the farming business. The green-house of Hon. B. V. FRENCH, and plants in full bloom, is the most splendid natural curiosity now in the vegetable kingdom in Norfolk county."

How much better would it be for our country—how much it would increase their own happiness—if hundreds and thousands of our rich men would follow the example of Messrs. FRENCH and WILDER.

MULCHING.—This is an operation in tree management that begins to be pretty well understood and appreciated.—A very intelligent and observing lady, of Port Gibson, Miss., writes us as follows:

"This matter of mulching, I should say, from my own experience, is a very important one—in fact, (with proper planting,) it is the one thing needful to the success of fruit trees at the South, from the Northern nurseries. Mr. AFFLECK, of the nurseries near Natchez, dwells very earnestly on the difficulty of acclimating such trees here; but mulching removes this, at least so my success hitherto goes to prove; and, experience apart, common sense would show us that if it is useful at the North, it must be much more so at the South, in our very long, scorching summers. Sheathing the bark of the tree in straw cannot promote its health, I should think; and I see it affords shelter

RAISING FRUITS FROM SEEDS.—I have read with pleasure, and I hope with profit, too, your remarks on "Raising Fruits from Seeds," and the importance of husbanding "home resources." Too little attention to this important subject has hitherto been paid by fruit-growers; I trust your well-timed and judicious remarks will wake up a new and livelier interest in improving the native fruits, by a more general and thorough cultivation. There is much meaning in the word *cultivation*, whether applied to the heart or the mind, the garden, the orchard, or the farm. All need careful, constant, and thorough cultivation. To plant a rose, or a raspberry bush, and leave it to "cut its own fodder," or neglect it in its infancy, is not cultivation, any more than for a mother to neglect her infant offspring, and deny it the food congenial to its nature, would be to nurse and cherish it during its helplessness, and prepare it for usefulness, and the rich fruits of a long and virtuous life. If we would hope for rich clusters of good fruit, we must not only plant and transplant, but carefully nurse, feed, cherish, cultivate; and the process must go on and on, unto perfection. The wild flowers in our fields, and the wild berries upon our plains, in our valleys, and upon our mountain tops, are susceptible of great improvement and perfection by cultivation. These wild natives of the forest—the long blackberry, the red and the black raspberry—are all vastly improved in size and flavor by being removed from the forest and the field to the garden, and, under the watchful eye of the gardener, receiving food adapted to its nature, in the form of manure, and proper cultivation, doubles its size, and more than trebles its value for the table. What a luxury to the lovers of fruit is a bowl of berries plucked from the bush in your garden, planted, nursed, and cultivated with your own hands! That luxury it has been my pleasure to enjoy for a number of years, in the shape of native gooseberries, of the smooth species, blackberries, white, red, and black raspberries; they have more than doubled in size and amount of fruit, and increased in richness since taken from the woods and cultivated in the garden. The black raspberry, especially, is easy of cultivation, and is multiplied to any desirable extent by barely placing the end of a luxuriant twig, while in growth, an inch or two in the earth. In a few weeks the top thus buried in the soil takes root—cut it six inches from the ground, and you will have a fine plant growing with great luxuriance, but upwards, and ready for transplanting the ensuing autumn or succeeding spring. I have a fine bush of the *white* blackberry, a native of the Green Mountains of Vermont, in great perfection, and capable of being divided and transplanted into many bushes next spring, and hope, in due time, to accommodate myself and neighbors with this delicious fruit for the table. I may seem a little enthusiastic, but, believe me, there is a luxury in cultivating and partaking of the fruits of the earth, as well as in receiving and in doing good. E. P. W.—*Montpelier, Vt.*

"THE SPRING FLOWER GARDEN," in the June number of the *Horticulturist*, is so much to the purpose, and the idea of planting bulbs when in full bloom, comes home so close that I should have thought you were "poking fun" at us, if I had not known the practice to be so common elsewhere. There is, however, another error very frequent at the south-west, in planting what are generally called Dutch bulbs. Many suppose because winter sets in later, and digging the garden can be done in some seasons even late in December, that bulbs may be planted later here than at the north; but it ought not to be so. These bulbs bloom much earlier here than with you, and if kept out of the ground till late, they have to bloom before they are ready (if the expression be a proper one), and the flowers will be poor. On the 23d of December, 1851, I planted two dozen Tulips, of the same kind I had planted already in the middle of October; the bulbs were, to all appearance, perfectly sound; they came into bloom almost as early as those of the first planting (only three days difference), but the flowers were small, lasted only a few days, and when I came to take up the bulbs, they were lean and lank, having none of that solid look one expects to see in a Dutch bulb. I usually plant my bulbs in October—the fore part of November will do very well, but the only excuse for planting late in December should be the impossibility of getting the bulbs sooner. J. M. I. SMITH.—*Fayetteville, Ark.*

TREES AND PLANTS OF FLORIDA.—In the *Horticulturist* for August I notice that a Louisiana correspondent takes me to task for certain alleged errors of statement (in the April number) concerning the trees of Florida. As a resident of the South, he is to be presumed more competent to speak in this matter than I, a sojourner of two winters only. He will notice, also, that I said in the preface to my article, "I do not aim at special accuracy, or fulness of detail," &c.; and yet, I think he has magnified my errors.

My statement that the *Magnolia grandiflora* puts forth new leaves, and that it blossoms in the month of March, is substantially correct. In the vicinity of Jacksonville, during the last half of the month, I observed, daily, the falling of old leaves from the *Magnolia*, and the growth of new ones; and I watched with great interest the coming out of the beautiful, white, downy flower-buds, until the last few days of the month, when, being obliged to leave the country, I plucked several fine specimens to press and carry to the North. I have now before me several of these clusters, showing the young leaves, and the flower-buds, as large as a full-grown butternut. Besides, as I was speaking of Florida as a State, and not of its northern part, where Jacksonville is situated, and as I had been often told by Floridians that vegetation in the middle and southern parts of the State is a fortnight earlier than in Jacksonville, I thought myself justified in saying that the *Magnolia* flowers in March.

Let me beg a little mercy, also, for the statement that at this early period, "trees of all kinds put forth fresh leaves." The Black Walnut and the May Hickory, of which Mr. LAWRENCE speaks, I never saw; but having noticed that such deciduous trees as the Mulberry, the Peach, the Pride of China, the Soft Maple, the Red-bud, the Cypress, the Gum tree, the White Locust, the Wild Cherry and Plum, several varieties of the Oak, and other trees whose names I was ignorant of, were in full leaf, some of them in February, and all of them in March, I thought it correct to say as above; I did not see a leafless tree in the latter part of March.

As to the Pomegranate, if my friend means to say that it does not blossom in March, I can only reply that I saw an abundance of its flowers during that month, and that I have now in my portfolio a perfect blossom which I gathered in that month, and pressed for preservation.

As to "the little brown flowers of the long trailing moss" appearing in March, I reply by sending you a specimen of the flower and the moss, which I gathered during March. The flower is, doubtless, a darker brown at present, than when it was first plucked.

I can not but think that the climate of "Laurel Hill, La.," is colder than that of Florida. I trust, also, that the large-heartedness and courtesy of the Southerner will pardon the seeming errors of my first paper, and the freedom of this reply to his strictures upon it. A. D. G.—*Clinton, N. Y.*

CULTURE OF TOMATOES.—For several years I have taken special pains in the cultivation of a superior kind of tomatoes. They are very large and smooth, perfectly solid inside, and of the finest and richest flavor. Their reputation is firmly established here and wherever else they are known. I received, last evening, a letter from a gentleman in Brooklyn, in your State, requesting some practical directions about trimming and training them. The following is a copy of my reply:

The laterals, as they appear, should be taken off from the tomatoes up to the first blossom bud. When they have reached the height desired, they should be shortened in. This is done by nipping off the terminal buds. A trellis upon which to train them is readily made by setting stakes behind each row slanting very considerably backward. On these, lath may be nailed about a foot apart, or wires may be stretched. Each branch of the tomatoes will need to be tied at first, but afterwards it will be sufficient to run twine from stake to stake in front of them. Mine have been trimmed and trained in that manner for many years. They are now about six feet high and have been shortened in twice. They are as healthy, and thrifty, and full of fruit as one could wish. The fruit or vine thus treated is as much superior to that obtained without trimming or training, as is the rich, luscious peach from the topmost bough to the green and tasteless specimens from the middle or shady side of the tree. CHARLES ROBINSON.—*New Haven.*

TREATMENT OF A ROSE BUSH.—I have possessed for many years a very fine grafted Rose bush of the kind called *Cloth of Gold*; these possess the peculiarity of blooming finely and freely, with very large flowers, when in the green-house; but in the open air the roses are not nearly so remarkable. My bush began to run some three years ago very rampantly; but my gardener regularly cut it down to produce grafts from, losing the roses. I determined to "make an example" of the specimen, and proceeded as follows, with what results you shall hear.

I planted the bush under the drawing-room front window, and made a plant-case, covering the sides with bark to make it sightly. As soon as heavy frosts set in, I bent down the stem and fixed it there with a pronged stick, covering the whole, which had now a fine head, with glass. Being near the door, and under constant observation, I treated it as is usual with salad or cucumber beds—that is, I gave it plenty of air when the sun was on it, or the air was sufficiently warm.

The result has been, my pet has been raised up in the spring in the most extraordinary vigor, health, and beauty. This year it came forth with eighty-four enormous buds, followed by giant flowers, so much so that it became a perfect show to the neighborhood. I branched the runners to stakes, and it now measures twenty-one feet in length, and next year will mount to the second story on a special trellis. It is now perfecting a second series of buds, and will continue to bloom till late in the fall. I may add, that I have watered it and my other roses once a week with a solution of sulphate of ammonia, in the proportion of one pound to thirty gallons. Lovers of roses will do well to try the experiment with *Cloth of Gold*, *Soffrana*, *Solfatare*, &c. J. J. S.—*Germanstown, Pa.*

I READ with much interest in the *Horticulturist* for June, 1853, "Hints on Pinching." It was confined to pinching trees, but it recalled to my memory an experiment I once made in Newport, R. I., with some cucumber vines. I had a narrow border, not more than two feet and a half wide, on the edge of a paved yard enclosed by a high board fence. I planted three cucumber hills in the border, and laid some brush (such as are used for pea-vines) between them and the board fence. As soon as they crept up to the top of the brush, I pinched off the ends of the vine which thickened rapidly around the roots, and in every direction throwing out the most vigorous foliage and a profusion of flowers. I did not allow the cucumbers to grow large, but watched them, and such as I wished to reserve for the table, I picked as soon as they became of proper size; all the rest were carefully gathered every day for pickles, every day pinching off the bud at the end of every shoot. In this way the hills continued fresh and productive until they were touched by frost. Some judgment can be formed of the value of this practice when I add, that more than a barrel of pickles were made from the three hills, beside allowing a supply for the table. Whenever a leaf began to look rusty or yellowish it was removed, and every cucumber and leaf was cut off with large scissors, so as not to disturb or wound the vine. There is an advantage in having them run up on bushes instead of trailing over the ground, because they are much injured by being trodden on; and by being kept low on the bushes they can be easily and thoroughly examined every day, which is essential, for if one or two cucumbers are overlooked and grow very large, it stops the yield of that vine.

H. A.

SHELTER.—A correspondent writing from Trumansburg, N. Y., says:

"I think your article on 'Shelter' is particularly applicable to my case, as I have an orchard of from one to two hundred peach trees growing in an exposed situation which have been old enough to bear three years, and not a peach has yet set on them, to my know^{ledge}, though the trees grow very luxuriantly, so much so as to attract the attention of all who am. I attribute their failure to produce peaches to the cold winds, as peach trees within a few rods of them bear regularly though in no more favorable situation, except having build an apple orchard on the north-west of them, which screens them from the cold winds."

STRAWBERRY PLANTING.—I notice the remarks in your last number of the *Genesee Farmer* on the planting of strawberries. I have made trial of planting at all seasons, and of all other periods I prefer the month of August for this State and all north of it, and September for the States further south, and October for the extreme South. During the present month, which has been one of uncommon heat, I have had at least fifty new beds planted, and I have not lost a single plant. We dip the roots in a puddle and water the plants as soon as set, and turn a flower pot over each, during the day, in the small beds, and spread mats over the large beds, removing them all at evening. This is continued for five or six days. The prominent advantage of planting thus early is, that the plants become well established before cold weather and considerably increase in number, and you are sure of a fair crop the ensuing season. WM. R. PRINCE—*Flushing, L. I.*

Notices of Books, Pamphlets, &c.

ANNALS OF POMOLOGY: Published by the Belgian Royal Commission. Brussels, 1858.

Some time ago we mentioned the announcement of this work. Under the circumstances we naturally formed very high expectations of the merits, not only of its scientific accuracy but of its artistic execution. We are somewhat disappointed. It is in quarto form, well printed, on good paper, but the colored plates, we must say, are unworthy such a work. To be sure there is an edition of a small number of copies said to be on finer paper and colored with particular care. This cannot be the one sent us; but we supposed they would all be colored with care. The letter press descriptions are, as far as we have examined them, very complete and accurate. The subjects of the first three numbers are, the *Winter Bonchrétien*, the *Counseiller de la Cour*, the *Marie Parent*, the *Duchesse d'Angouleme*, the *Duchesse d'Angouleme panachée*, and the *Brown Beurré* pears; the *Pomme Apé Etoilée* (double or five-sided Lady apple); the *Victoria* raspberry; the *Princesse Royal*, *Reine des Belges*, *Royal Pink*, *Goliah*, and *Mammoth* strawberries; the *Reine Hortense*, and *Napoleon Bigarreau* cherries; the *Muscat blanc hatif de Jara* grape.

The editing committee are Messrs. DE BAVAY, BIVOET, HENNEAU, and ROYER.

It is published in numbers without any fixed date. Each number contains four plates. Price, 24 f. per annum.

A TREATISE ON INSECTS INJURIOUS TO VEGETATION: By THADDEUS WILLIAM HARRIS, M. D. Second Edition. Boston, 1852.

It would appear that insects injurious to vegetation are every year increasing in numbers, and this, with a greatly increased attention given to cultivation of late, has awakened, on the subject of entomology, a very general and active spirit of inquiry. On all sides people are seeking information concerning the names and habits of insects; they find, by dearly bought experience, that without some such knowledge it is almost impossible to contend successfully with the swarms of greedy bugs, beetles, caterpillars, and other pests that prey upon their crops. A large portion of the Eastern States have been severely scourged the present season with the "*Palmer worm*," so called. It has also been destructive in some parts of New York. The *Rose slug* has made its appearance in localities where it was never seen before. Species of *Curculios*, hitherto rarely seen, have been destructive in some places. The *Apple borer*, too, has, we are advised, found its way into new regions. These and similar facts, are sufficient to call attention in earnest to the study of insect life and habits, and to give importance to works touching upon this subject. This treatise of Prof. HARRIS is the only one we have in this country of general practical utility. The first

edition was issued some ten years ago. "It formed one of the scientific reports which were prepared and published by the Commissioners on the Zoological and Statistical survey of Massachusetts agreeably to an order of the General Court, and at the expense of the State." The present edition is much enlarged and improved; a great amount of information and experience has been collected and embodied in it, adding greatly to its value. It contains a full account of the *Psylla pyri*, an important insect that has infested pear trees in some localities, some account of which was given in the February number of the *Horticulturist*. The *Chinch bug*, a destructive pest of grain crops in some localities; the *Angoumois moth*, or flying weevil; the *Eurytoma Hordei*, or joint worm; the *Hessian fly*, and *Wheat fly*, all notorious depredators on field crops have been fully and minutely treated of. There is also an account of the *Cotton worm* of the South, and of insects falsely charged with the potato blight. All the latest experience in regard to insects injurious to fruits and flowers, have been carefully collected and furnish information of the greatest value to every cultivator. The work has but one defect, and that is, the want of illustrative drawings that would enable persons unlearned in entomology to identify insects. We trust that measures will be taken to supply this defect. The example of Massachusetts, in ordering the preparation of such a work as this, should be imitated by every State in the Union; in no other department of science could the necessary cost be better expended. The preparation of this treatise is not the only way in which Prof. HARRIS has conferred benefits on agricultural and horticultural pursuits; he is daily imparting information through the press and by private letters. We should wish to see him in a position, if it were agreeable to himself, where his entire attention might be devoted to this subject.

Answers to Correspondents.

ALTHOUGH a novice in fruit-culture, I propose to state a few facts which I have learned by observation the present season, and propose a few questions for information from you.

I have a dwarf Pear tree (*Duchesse d'Angouleme*), set last season, which grew luxuriantly, and started finely this spring, and was in blossom, when we had quite a severe frost (not to the material injury of fruit blossoms), a few days after which the leaves on this tree turned black and dropped off. The limbs at the extremity became black, and black spots appeared at the base of the buds, and although I cut away all the diseased parts the tree has not started, and will probably die. Was this caused by the frost?

The green aphid has made its appearance on some of my trees, and I have observed that they are found only on trees infested with ants, and find the ants collected on the leaves and shoots with the aphid. On applying the tobacco wash, the ants will collect on other parts of the trees, and the aphid will then appear in a day or two, and I have thus far found, without exception, that where ants infest a tree the aphid are found, and where there are no ants, no aphid can be found. Do the ants produce aphid. (1.)

I observed the communication of Mr. B., of Kenosha, in the May number of the *Horticulturist* and will say that the bark-louse is found on trees obtained from nurseries here, and I find that on my trees they extend to the extremity of the last year's growth; and I have just been into an orchard of bearing size, and find the trees completely coated with lice from the ground to the extremity of the limbs. Can the wash you recommend be applied to all parts of the tree without injury? (2.)

I had seen it stated that the bursting of the bark of Cherry trees at the West was probably caused by their rapid growth; and to guard against this, I set my trees in grass ground, and have not manured at all, but have kept the ground clean for several feet around the base, and

mulched in the summer season, and they have grown very slow. I have a *Black Eagle*, that was set out two years ago, and has not grown a foot in that time, and does not exceed two inches in diameter, and the bark has cracked to the wood this season. A. O. BABCOCK.—*East Troy, Wisconsin.* (3.)

(1.) The reason of your finding the ants and aphids always in company is, that the ants feed upon a sweet fluid discharged by the aphids. You will see this if you observe closely.

(2.) The wash recommended in the May number may be safely applied to all parts of the tree on which bark-lice may be found.

(3.) Rapid growth may contribute towards producing the malady known as the bursting of bark, but it is by no means the sole or chief cause. A tree, growing slowly, may have soft, imperfectly matured wood, as well as one growing rapidly; rapid growth is safe enough if made at the proper season—say June or July. The bursting of the bark is the result of injuries sustained by the freezing and thawing of winter. The vessels, or cells, become disorganized by expansion and contraction, and the sap becomes diseased. Cherry trees of a hardy nature, such as Dukes and Morellos, and those well sheltered from the sun and cold winds in winter, or protected by some covering, escape injury of this kind.

FRUITS, AND FRUIT TREES IN ILLINOIS AND WISCONSIN.—This is our bearing year for peaches. There will be an abundance of seedling peaches in the northern part of this State this year, and, I believe, through the whole State. They do not bear oftener than once in three or four years, and, with me, seedlings have been much harder than any cultivated variety that I have tried. Winter before last, I presume, one-third of all the peach trees in Northern Illinois were killed. Mine were more than one-third killed in all situations except a row of about fifty trees planted on the west side of a tight board fence six feet high, where none of them were killed, and I think this is a fact worthy of note in a country where the peach tree is so liable to winter-kill. Apples grow well all over the prairie country, and pears promise well in this vicinity. Your fruit-men who have sent their tens of thousands of barrels of apples and pears yearly to sell here must look elsewhere for a market soon, as young orchards are coming into bearing all over the country, and each year our nurserymen are increasing their sales greatly. I can get no pears from the *Duchesse d'Angoulême*; they blossom early and very full, but seldom set any pears, and when they have set, the wind blows them off before they get ripe.

Do you know anything about a very large peach originated in Poughkeepsie called the *Pine-apple Cling*. If it is so large and fine as I have heard it recommended, I should want to get it. (1).

I want some good blackberries to cultivate. Our native fruit is not very good. Do you know where I can get the best variety; and do you know anything about Mr. LAWTON's variety of *New Rochelle*, which was noticed in the *Horticulturist*? (2). JOHN GAGE.—*Waukegan, Ill.*

(1.) A synonym of the *Lemon Cling*—a very good variety.

(2.) It is said to be a fine variety.

I received some Deodar Cedars this spring and planted them just as they came from the nursery, and I now find that some of them have three or four leaders or stems all in a clump, of about equal strength, while others have only two. Should I cut them all down to a single stem or not? They look very handsome in their present condition, being only two or three feet high; but what their appearance might be when they arrive at considerable size I cannot tell, as I have only seen small plants. A. J. N.—*Montgomery, Ala.*

Select the strongest and best placed shoot for a leader, and encourage it by tying up and

I AM growing a few native grapes—training them with two horizontal shoots at the bottom of the trellis, and thence perpendicular shoots at intervals, but am at a loss to know whether or not I would be correct in pinching off the shoots immediately on their reaching the top of the trellis (about five feet high). I am advised by some to allow the shoots intended for next year's fruiting to grow as far as they can, and only to cut at the annual pruning, and by others as above. Now, Mr. Editor, would you have the goodness to tell me which is correct. A SUBSCRIBER. *Hamilton, Canada West.*

Let the leading canes grow as far as they will, stopping them only late in the season to ripen the wood, when there will be no danger of causing the buds for next year's bearing to push. Pinch all the side shoots at the second leaf, and the fruit branches at the second joint above the the fruit.

I have a plant of the *Tecoma grandiflora*, but unfortunately it seems rather tender, having been winter-killed for two or three years. It has now blossomed, and I am desirous of raising some seedlings in order that they may be hardier than the original. In what way shall I proceed with the seeds, if any come to maturity? D. L. J.—*Birmingham, New Haven Co., Conn.*

Keep the seeds till spring, in the pods; then sow in dry, fine soil, just as you would seeds of the Catalpa. Cover lightly. Young plants need protection in winter, for a year or two, until the wood becomes firm. Grafting on the *radicans* is said to make the *grandiflora* more hardy. We have not tried it.

Will you, or some of your numerous correspondents, be so kind as to inform a subscriber to the *Horticulturist* what quantity of grapes it will take to make ten gallons of wine, and also the best recipe for making wine? The grapes are grown under glass, and are the *Catawba* and *Isabella*. MAURICE LANDERS.—*Chicopee, Mass.*

We must recommend you *Buchanan's Treatise on the Culture of the Grape and Wine Making*, which will furnish all the information you want.

Will you inform me if bones boiled soft, such as can be had at glue factories, is valuable manure for young pear trees from two to five years old? How should it be applied, and how much to each tree? A SUBSCRIBER.

Will some one answer who has used bones in this way?

(J. B., Channahon, Ill.) BUDS, OR SCIONS.—We prefer to propagate from vigorous, healthy trees on pear stocks, though it is perfectly safe to take buds or grafts from healthy trees on quince stock. The difficulty is, that on the latter the trees bear so early and so abundantly as to become enfeebled, unless very well managed.

(T. B., Trumansburgh, N. Y.) INSECTS.—The bug you speak of may be the *May Beetle*, and the only remedy is to shake them from the trees in the evening and destroy them. They may not trouble you so much in many years to come.

Your requests have been attended to.

Agricultural and Horticultural Societies.

EXHIBITIONS.—The *New York Horticultural Society* (see advertising pages) announce their fall exhibition on the 20th, 21st, and 22d of September—the same days, unfortunately, on which the N. Y. State Fair is held at Saratoga. The Society is making great efforts to get up a creditable show, and we trust will be successful. They say that their premium list is liberal, but on looking it over, we can see little worthy of being called liberal for a metropolitan show. Neither do we think the premiums well proportioned. The same premiums are awarded for Savoy cabbages, and cauliflower, and brocoli. \$10 is offered for the best four hot-house plants in bloom, and only \$5 for the best collection of conifers. For the best twelve roses, just the same as the best twelve verbenas, phloxes, or antirrhinums, and the same for the *two best pumpkins* as for the *best general display of vegetables*. The premiums on foreign grapes are somewhat liberal, amounting to between \$50 and \$60.

The *New York State Agricultural Society* holds its annual show at Saratoga, on the 20th, 21st, and 22d of September. The grounds and arrangements are said to be more complete and convenient than they have ever been before, and we have no doubt the show will be a good one.

The *New Haven (Conn.) Horticultural Society* will hold its 23d annual exhibition in New Haven on the 27th, 28th, and 29th. The doors open on the evening of the 27th at 7 o'clock, and at 9 o'clock, A. M., on the 28th and 29th. This Society holds weekly exhibitions every Saturday at the seed-store of J. I. WALTER, 49 Chapel street.

The *Pittsburg (Penn.) Horticultural Society* holds its annual exhibition on the 6th, 7th, 8th, and 9th of September in Masonic Hall, 5th street. A "sweepstake premium of \$20 will be given for the largest and best collection of fruits from any adjoining State, and \$10 for the second best."

The *Delaware Horticultural Society* will hold its annual exhibition on the 14th and 15th September in the Odd Fellows' Hall, Wilmington. Competition open to all, and the Society offers to defray the cost of carriage on contributions from a distance.

The *Pennsylvania State Agricultural Society* holds its annual exhibition at Pittsburg on the 27th, 28th 29th, and 30th September.

The first annual fair of the *South-Western Agricultural and Mechanical Association* will be held at Louisville, Ky., on the 11th of October, continuing five days.

The *North-West Pomological Association* holds its next session at Chicago on the 4th, 5th, 6th, and 7th of October next, commencing at 10 o'clock, A. M., on the 4th. We should be there certainly, if it were not so late in the season.

The *Horticultural Society of the Valley of the Genesee* will hold its fall exhibition on the first day of October.

Pennsylvania Horticultural Society annual show at Philadelphia, and the *Massachusetts Horticultural Society* at Boston 21st, 22d, and 23d September.

The annual exhibition of the *Kentucky Horticultural Society* will be held in Louisville on the 28th and 29th of September. The following is a list of officers and committees for the year 1858.

President.—LAWRENCE YOUNG.

Vice Presidents.—Dr. W. C. Galt, Arthur Peter, J. F. Willey, Elias Dorsey, Jas. A. Miller, Geo. G. Hikes, Ben. H. Lawrence, Wm. Mix, C. C. Carey, Edward D. Hobbs, Ed. Wilson, John I. Jacob, W. C. Williams, Ormsby Gray, Henry Churchill, Philip Speed, Wm. E. Glover, Captain Sale, Isaac

Everett, E. Seabolt, Ormsby Hite, Warrick Miller, F. G. Edwards, A. M. D. Robertson, James Hewitt, Dr. J. A. Moore, Dr. Seaton, Wm. Short, S. R. Chenoweth, John F. Thatcher, John Herr, P. S. Birkenmayer, Mortimore Roberts, George Heinsohn, Thomas Y. Brent, T. W. Gibson.

Treasurer and Recording Secretary.—A. G. Munn.

Corresponding Secretaries.—W. D. Gallagher, Noble Butler.

Permanent Executive Committee.—Ormsby Hite, Arthur Peter, Robert Ross, Thomas S. Kennedy, Edwin Bryant.

Committee of Arrangements for the Annual Exhibition.—The Permanent Executive Committee, assisted by Henry Nanz, Martin Bopert, P. S. Birkenmayer, Edward Wilson, A. G. Munn, Geo. Heinsohn.

Judges at the Annual Exhibition.—Of Fruits.—Edward D. Hobbs, Arthur Peter, J. P. Morton.

Of Flowers.—Dr. C. W. Short, Dr. Donhoff, Dr. Gross.

Of Vegetables.—Thomas Smith, Michael Kean, Dr. J. C. Johnston.

The second annual fair of the *La Porte (Ind.) Horticultural Society* will be held at La Porte on Thursday, Friday, and Saturday, September 22d, 23d, and 24th. The following is a list of the officers:

President.—Hon. C. W. CATHCART.

Vice President.—WM. J. WALKER.

Treasurer.—Col. W. A. PLACE.

Secretary.—JOHN B. FRAVEL.

Township Directors.—Gen. Joseph Orr, Center; Jacob R. Hall, Scipio; S. S. Sabins, Noble; J. J. Mann, Clinton; Nimrod West, Cass; I. S. Jessup, North Durham; M. Hargan, Springfield; G. C. Havens, Pleasant; I. G. Sleight, Michigan; Daniel Low, Cold Spring; Jas. Catterlin, Galena; M. Ireland, Hudson; P. Ireland, Wills; A. Blackburn, Kankakee; H. P. Lanse, Union.

In addition to the above, State Fairs will be held as follows:

Vermont, Montpelier, September 18, 14, 15.

Kentucky, Lexington, September 18, 14, 15, 16, 17.

Ohio, Dayton, September 20, 21, 22, 23.

Michigan, Detroit, September 28, 29, 30.

Wisconsin, Watertown, October 4, 5, 6, 7.

New Hampshire, Manchester, October 5, 6, 7.

Maryland, October 25, 26, 27, 28.

Indiana, Lafayette, October 11, 12, 13, 14.

Virginia, Richmond, November 1, 2, 3.

Lower Canada Board of Agriculture, Annual Exhibition, Montreal, September 27, 28, 29, 30.

Upper Canada, Hamilton, October 4, 5, 6, 7.

Southern Central Agricultural Society, Augusta, Ga., October 17, 18, 19, 20.

PENNSYLVANIA HORTICULTURAL SOCIETY.—SPECIAL REPORT OF THE ENTOMOLOGICAL COMMITTEE.—August 15, 1853.—The Committee on Entomology respectfully report: That their attention has recently been directed to several insects, of which specimens, in various stages of transformation, were received from members of the Society.

A species of *Coccus*, or Scale Insect, of the Apple tree; a noxious bark-louse, which injures the tree by sucking the juices from the branches to which it is permanently attached. They are of a brown color, about one-tenth of an inch in length, of an oblong oval form, and gregarious in their habits. Where they are crowded together in great numbers, on the limbs and branches, as is often the case, the growth of the tree is materially impaired, and its life endangered. Dr. T.

W. HARRIS, in his able "Report on the Insects of Massachusetts injurious to vegetation," recommends, as the best remedy for its destruction, "a wash made of two parts of soft soap and eight of water, with which is to be mixed lime enough to bring it to the consistence of thick white-wash." This application is to be put on with a brush, to the limbs affected, "in the early part of June, when the insects are young and tender." We have also used, with entire success, in the winter, the whale-oil-soap, applied with a hard brush.

Carpocapsa pomonella, or Apple Moth. This is the insect which disfigures so many of our apples, and causes such numbers of them to fall prematurely from the tree. Mr. EWENS, a member of our Society, in passing through his orchard, pulled up a sod of grass and laid it in the crotch of an apple tree; subsequently, he found it full of cocoons, which proved to belong to the insect in question. In this case, the apple worms, as is usual with them, had left the fruit, after they had attained their full larval growth, (some of them while it was on the tree, and others after it had fallen,) to take refuge in the crevices of the trunk; but finding a convenient shelter in the tuft of grass, they availed themselves of it. Dr. HARRIS has recommended old cloth to be used for this purpose; and it is evident that if these facts be taken advantage of when the infected apples begin to drop prematurely, the summer and autumnal broods may be materially diminished. It is of most importance to attend to the latter brood, which furnishes the individuals that live through the winter, and thus preserve the species for another year.

Aphis (Pemphigus) stamineus. This name is proposed for a large species of *Aphis* which forms follicles on the leaves of the silver-leaved Maple (*Acer eriocarpum*). The specimens were sent to us by our ex-President, CALKES CORP, Esq. This curious *Aphis* appears to be a new species. Dr. FROX, in the descriptions of the New York State Cabinet, mentions the European *Aphis aceris* as occurring in New York, and may have this woolly species in view; but the description of the foreign one does not mention the remarkable filaments which approximate the insect to certain tropical forms. Both sexes are covered with white down, and have a bunch of white filaments posteriorly, some of which are three-fourths of an inch long, a character in which this species surpasses the *Eriosoma* of the apple tree. *Male*.—Black, feet long, slender, and rufous; tarsi bi-articulate; wings slightly deflexed, translucent, pale ferruginous at the base; submarginal nervure conspicuous, black, and ending in a long stigma; disc with four simple nervures; posterior wings with three nervures; mesonotum polished, with a deep Y-shaped impression; abdomen without tubes; promusculis obsolete; antennae 6—articulate, the first two short, the 3d long, and the 4th, 5th, 6th, gradually lengthening; length of the body $1\frac{1}{2}$ lines, or to the end of the wings $2\frac{1}{2}$. *Female and pupa*.—Apterous, dark reddish brown, feet paler; promusculis twice as long as the head, thickened near the apex; length $1\frac{1}{2}$ lines.

KENTUCKY HORTICULTURAL SOCIETY.—Saturday, August 6th, was a proud day for the managers and friends of this Society. The display was by far the most imposing of the season, and in some of its features might have challenged a comparison with any similar display in Philadelphia, New York, or Boston. The show of peaches and plums was particularly fine in its appearance, and varied and profuse in quantity. The contributions from our friend L. YOUNG, Esq., President of the Society, have been, as all our readers are aware, so uniformly creditable that we were not surprised to see in passing around the Societies tables his articles, clever as usual; but we confess we were surprised, and agreeably, too, on finding that so large a portion of the contributors of Saturday had been able to bring forward specimens which, in their kind, would compare favorably with those even of the President. We do not wish to seem invidious by referring to a few where so many were deserving of notice. But we do not misinterpret the judgment of the very large and intelligent crowd of visitors when we designate as surpassingly beautiful, in their kind, the plate of pears contributed by Mr. GEORGE HERR, the plums by Capt. WILLIAM GIBSON, of Charlestown, Ind., and Mrs. FORD, of Jefferson county, and the peaches of Mr. JACOB JOHNSON,

PHILIP SPEED, and E. D. HOBBS, Esq., all of Jefferson county. Although the whole stock of admiration of the large concourse of visitors seemed exhausted upon fruits, yet this state of things did not result from any falling off in the beauty or variety of floral contributions. Among the lady contributors we noticed fine bouquets by Mrs. PRAY and Mrs. EDMONIA ORMSBY, and we were glad to see in their proper places the standing contributions of Messrs. WILSON, NANTZ, and BOPERT.

The sale at 11 o'clock went off very satisfactorily to all concerned, and when we consider the large display the bidding was very spirited. We noticed that a plate of peaches, consisting of ten or twelve, grown by PHILIP SPEED, Esq., was purchased by one of our wealthy citizens at \$2.50, and that another grown by the President was purchased by the same gentleman at \$3.75. We noticed also that three small plates of HAMILTON SMITH's imported plum, *Jaune Hative*, containing five fruits each, and grown by the President, went off respectively at \$2, \$2.25, and \$2.50. By the way, the fruit committee have decided that this plum, besides being of the largest class, (some measuring in circumference 7 inches one way by 6½ the other,*) is of the finest flavor. There was, in our opinion, but one thing in the whole affair of Saturday which the managers of this Society can hope to alter for the better, and that was the comfort of the visitors. The Library Rooms, so generously granted to the Society without charge, are quite too small, and we are glad to learn that the executive committee have applied the only proper remedy, which was to procure more spacious and airy rooms, a task which they promptly performed in a few hours after the exhibition closed, and we are now authorized to say that the next exhibition and successive ones will be held at Mozart Hall, on the corner of Fourth and Jefferson streets.—*Louisville Journal*.

HORTICULTURAL MEETING AT TOLEDO, OHIO.—At a meeting of the citizens of Toledo, convened July 2, 1858, in pursuance of a call published in the city papers, MATTHEW JOHNSON was called to the chair, and T. M. COOLEY appointed Secretary.

On motion of J. W. SCOTT, it was resolved that the meeting proceed to organize a Society to be called the "*Toledo Horticultural Society*."

The following committee was appointed: Messrs. J. W. SCOTT, A. SMYTH, and C. E. PERIGO, to draft and support a Constitution and By-Laws for said Society.

Messrs. E. BLISS, C. W. HILL, and A. ALLEN, to report permanent officers.

Messrs. T. DUNLAP, W. BAKER, and F. J. SCOTT, to ascertain and report to the Society where and upon what terms a room for the meetings of the Society may be obtained.

On motion, the editors of the city papers were requested to urge upon the citizens of the place the importance of extending their aid to this organization.

Adjourned to Thursday, July 7, at 7 o'clock P. M., at the office of HILL, PERIGO & PRATT.

T. M. COOLEY, Secretary.

M. JOHNSON, Chairman.

At a subsequent meeting a Society was formed, and the following officers elected:

President.—J. W. SCOTT.

Vice President.—E. BLISS.

Secretary.—CHAS. E. PERIGO.

Treasurer.—T. DUNLAP.

Executive Board.—M. JOHNSON, C. W. HILL, J. M. WHITNEY.

AN Agricultural Society has been organized in Polk county, Iowa, for the promotion of Agriculture, Horticulture, Manufactures, Mechanics, and Household Arts. We hope to hear a good account of this young Society in the "far West."

*Too large for *Jaune Hative*.—Ed.



GOVERNOR WOOD.

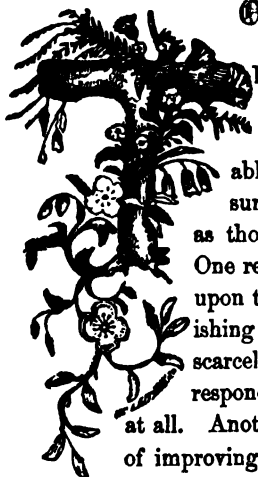
On the Preparation of

The following is a list of the books in the collection of the New York Public Library, which are now in the possession of the Library of the City of New York. The books are arranged in alphabetical order of the author's name, and are numbered in the order in which they were received by the Library. The books are arranged in alphabetical order of the author's name, and are numbered in the order in which they were received by the Library.

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On the Preparation of New Grounds.



THE season being at hand for the execution of ground-work in the improvement of new places, we have thought that a few hints might be offered on the subject not altogether unprofitably. Wherever we look, we see elegant and costly dwellings surrounded by incomplete, neglected grounds, looking precisely as though the proprietor had spent his last dollar on his buildings. One reason for this, is our universal hurry. No sooner do we decide upon the erection of a dwelling, than up it goes like magic; the finishing stroke is given while the mortar in the foundation is yet scarcely dry. The garden and grounds must be completed with corresponding dispatch; right or wrong, it must be done *quickly* or not at all. Another reason is, that very few people take into account the cost of improving their grounds in such a manner as to correspond with the buildings. The builder's estimates alone are looked to; and by the time the building is finished, with all its extras, the proprietor's funds and patience have both been severely taxed, and the gardens and grounds stand a poor chance for their appropriate share of attention. Another reason still, is that the proper preparation of ground for gardens, lawns, and plantations, is neither well understood nor appreciated. Most people seem to imagine that a team with a plow and a scraper can do all that is necessary; and so the ground is plowed and scraped and levelled, and it is then ready for planting. Now this will never do; such a system, or rather such a course, is not only disgraceful but unprofitable, because people who plant in such ground soon find out their mistakes, and are compelled to correct them in a very disagreeable and costly way.

We therefore beg gentlemen who are about fitting up country or suburban residences not to overlook the improvement of their grounds in their estimates—not to regard it as a mere item unworthy of note, but to count the cost carefully, and go about the work deliberately, with a firm purpose to do whatever be done *thoroughly*. Determine at the outset to be patient, and in the end you will secure results that will be alike creditable and satisfactory.

The operations on ground to fit it either for useful or ornamental gardening comprise grading or leveling, draining, trenching, and manuring. When we speak of leveling, or grading, we do not wish to be understood as supposing that every one will cut down all the natural undulations of the surface, for this would, in many cases, destroy some of the finest features of the ground; but there are on almost all new places certain abrupt or broken spots that must be brought into a proper shape by grading. This is more particularly the case in small places, where a broken surface is not allowable to any considerable extent. Now, when laborers are directed to grade a piece of ground, their common method is to draw off the surface with a scraper

into the lowest parts until the leveling is accomplished, leaving the ground in a state totally unfit for the growth of either trees or grass; and that, too, even after a great amount of labor has been expended in replacing the surface. We can at this moment point to multitudes of gardens, and to many important public grounds, ruined by this ignorant process. The true way is, to throw all the surface soil that is worth saving on one side, remove the subsoil to the proper depth, and then to replace the natural surface. Draining is not absolutely necessary in all cases, but yet there are few in which it can be entirely dispensed with. There can be no healthy or luxuriant growth of trees or plants where there is stagnant moisture in the soils. The common opinion is, that draining is only necessary when water lodges on the surface; but this is a great error, for many soils that appear perfectly dry on the surface stand in the greatest need of draining. A stiff clay subsoil, or a mixture of sand, clay, and gravel, almost as hard as iron, holds water like a basin, and the ground, although apparently dry on the surface, becomes sour, and bakes together in a solid impervious mass. Beside, it is unhealthy to live in the neighborhood of wet or badly drained soils, and unpleasant to cultivate them. Perfect drainage is one thing indispensable, and fortunately the means of doing it are within every one's reach. Where stones abound these may be used; otherwise, tile, which is now manufactured extensively in many parts of the country. We advise every one who has grounds to improve, and desire full and reliable information on the subject, to refer to the reports of Mr. T. G. YEOMANS, of Walworth, N. Y., or Mr. JOHN JOHNSON, of Geneva, to the New York State Agricultural Society.*

Next to draining comes the process of deepening by trenching or subsoil plowing. This is an operation of the utmost importance in all soils and situations. In this country we are subject in summer to severe protracted drouths, during which trees, plants, or grass, on a shallow soil can barely sustain a feeble existence. In small places trenching is preferable, and for the fruit and kitchen garden we would recommend it in all cases. It is the true way to give the soil a thorough and permanent deepening. It is not merely an additional depth we gain by trenching; it also enables surplus moisture to pass off freely into the drains, and keeps the soil sweet and porous. Scarcely a day passes that we do not see or hear the most conclusive evidences in favor of trenching. A short time ago a gentleman said to us, "I have made up my mind that it is perfectly idle to attempt making a lawn, or to expect a luxuriant growth of trees in untrenched soil. I have tried to do it for seven years, and during all that time had the mortification to see my grass nearly die out every summer, and the trees grow by inches instead of feet." He finally made up his mind to try what effect trenching would have, and has now the satisfaction to see his trees grow vigorously, and his lawn as green as emerald in the driest times. "Now," he says, "I advise every man to trench." Every experienced cultivator knows well the advantages of a deep soil. No where is its effects more obvious than on the lawn. In our own grounds one portion of a small plot was trenched deeply before it was seeded, and it rejoices in the deepest verdure in all weathers; another portion was

* See Transactions of New York State Agricultural Society.

not trenched, and when a month or six weeks of dry weather comes, as it did this season, it turns as brown as sole-leather.

Trenching with a spade to the depth of eighteen or twenty inches is somewhat costly, and, therefore, when a large tract is to be improved, the subsoil plow can be used. This answers every purpose, unless when the ground is so stony that it is impossible to keep the plow in the ground. The proper way to subsoil effectually is, to have the common plow go first and turn over a deep and wide furrow; then let the subsoil follow with not less than four horses or oxen. In preparing stiff soils we would advise two such plowings as this, one crossing the other; and it should be done late in the autumn or early in spring, while the subsoil is saturated with moisture: at a dry season of the year it is impossible.

Next comes manuring; and in this let there be no stinginess. Whoever contemplates the improvement of ground should begin early to prepare manures and composts, for this can not be done in a few days or weeks. It should be prepared a year beforehand, so as to be well decomposed and thoroughly mixed in order that it may not fill the land with all manner of noxious weeds. We would spread it over the surface and plow it down in the autumn at the first plowing, so that it might be properly incorporated with soil during subsequent working. The needful quantity of manure will, of course, vary according to the natural fertility and condition of the soil. In some cases, two inches deep spread evenly over the surface may be sufficient; in others, twice that would scarcely suffice. At all events, *be liberal*.

Our purpose at present is not so much to treat of these primary ground-works through the detail of practice, as to urge the necessity of making them the foundation of all improvements. We hope we shall never again hear it said, "I will plant my trees now and improve the ground afterwards, as I have leisure." Would it not be as wise to say, "I will erect my house now, and hereafter, when I have leisure, I will dig the cellars and construct the foundation?"

There is now a great and greatly increasing desire for rural homes. Hundreds are leaving the crowded cities and selecting homes for themselves and families in their suburbs. As our railroads increase, and furnish better facilities for communication between town and country, we may expect this state of things to continue. It is important, then, that the few simple truths we have stated be well understood. The pleasure of a suburban dwelling depends materially on the comfort and beauty which the gardens and grounds afford; and when they are neglected, or so mismanaged as to afford neither beauty or comfort, the great aim of rural life is lost. The growth of taste will, we trust, soon bring about a state of things in which men will not spend ten thousand dollars freely on a house, and one hundred dollars grudgingly on the garden.

GATHERING AND PRESERVATION OF FRUITS.

THIS is a subject respecting which we have much to learn in this country; and considering the vast amount of capital invested in fruit culture, and the prospective importance of the business in a commercial point of view, it becomes worthy of serious and immediate attention. How many of those who are in the possession of orchards and fruit-gardens know exactly when even to *gather* fruits in order to secure their greatest possible amount of excellence? May we not safely say that three-fourths of nearly all our summer fruits are consumed in an immature state? The keeping of fruits in winter, and the packing for distant markets, are questions that concern deeply the extensive orchardists of this country. We have translated from the *Revue Horticole* the following observations on this subject by Prof. DUBRIEL, formerly of Rouen and now of Paris. They contain many valuable hints and suggestions worthy of attentive perusal:

"The preservation of fruits is a question intimately connected with the fruit-garden. This should furnish during the entire year the same quantity of the best possible fruits. In order to do this it is true we must plant an equal number of varieties ripening their fruits during each month of the year. But this will be insufficient unless we adopt a mode of preservation which will retard the ripening of fruits to mid-winter, spring, or even the following summer. The fruit-garden can not give the results expected from it, if we are deprived of its products from February till June, when the earliest fruits begin to ripen. This question, then, has a certain importance, not only for those who gather and consume the fruit, but for those who deal in fruits and who without proper modes of keeping are exposed to great losses. As the mode of gathering has a certain influence on the preservation of fruits, we will first treat of that operation.

I. ON GATHERING.

"1st. DEGREE OF MATURITY.—Fruits should be gathered when they present a sufficient degree of maturity; and in this respect the different species of fruits require different treatment.

"*All the Stone Fruits*, the cherries excepted, should be taken from the tree three or four days before their absolute maturity.

"*The Kernel Fruits of Summer and Autumn* are gathered eight to twelve days before maturity.

"These fruits possess, then, the necessary elements to accomplish their maturation, which is nothing more than a chemical re-action independent, in some measure of vital action. In thus separating them from the tree they are deprived of the sap from the roots, they elaborate more completely that which is contained in their tissue, the sugary principle is then less affected by water, and a higher flavor is therefore acquired. The time suitable for gathering is when the side next the sun commences to change from green to yellow.

"*The Cherries, Gooseberries, and Raspberries*, are only gathered after their perfect maturity; but they should not be allowed to pass this moment, as they immediately lose some of their qualities.

"*The Kernel Fruits which ripen only in Winter* are gathered when they have accomplished their full development and before vegetation has completely ceased—that is to say, from the end of September to the end of October, according to the variety, the earliness of the season, and climate. Experience has demonstrated that fruits left on the trees after their growth do not keep so well; they lose their sugar and perfume, because at this time the temperature is ordinarily too low for the new fluids which arrive in their tissue to be sufficiently elaborated. If, on the contrary, this epoch be anticipated, the fruits wither and do not attain maturity. It is equally necessary to gather the fruits from the same tree at different times—first, those placed on the lower parts of the tree; then, eight or ten days after, those on the upper part, of which the growth is prolonged by the influence of the sap, which remains longer in this part of the tree. For the same reason the fruits of standard trees in the open ground are gathered later than those of espalier, and those of aged or languishing trees before those of young and vigorous ones. The precise moment for the gathering of each fruit is indicated by the facility with which it is detached from the tree when slightly lifted upwards.

"Various instruments under the name of '*Fruit Gatherers*' have been invented to detach the fruits at the tops of the trees without the aid of ladders; but their employment is too slow, and the fruits are more or less bruised and do not keep. When the fruits are gathered they are deposited in a basket similar to that used by the cultivators of Montreuil, fig. 1. It is about two feet long, eighteen inches wide, and a foot deep, with a carpet on the bottom. The fruits are laid in one by one, and only in three rows or tiers; when too many are laid on the top of each other, the bottom ones are bruised. Each tier is separated by a quantity of leaves. If they are peaches, each one is enveloped in a leaf of the vine. The basket, being sufficiently full, is carried on the head into a spacious and airy place, where the fruits are deposited on leaves or dry moss; the table of the fruit-room can serve this purpose. There the summer and autumn fruits achieve their maturity, and are taken thence to be consumed. The peaches should be cleaned of the down which covers them, and which is disagreeable to the mouth.

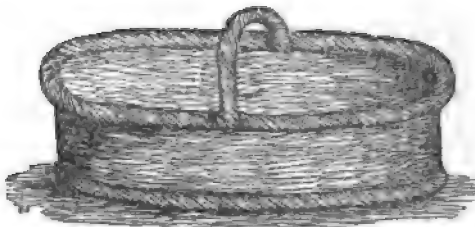


Fig. 1.

"*Grapes*, for immediate consumption or to be preserved fresh, are gathered only at perfect maturity; the longer they are left on the vine, the more the sugary principle will be developed. Grapes from contre-espaliers are to be preferred for keeping to those from espaliers, as experience has demonstrated to the cultivators of Thomery that they keep better.

"*The Dry Fruits*, such as filberts, chestnuts, &c., are gathered at the moment when they detach themselves from the trees.

"In gathering fruits, a dry time and a cloudless sky should be chosen ; and the middle of the day, from noon to four o'clock, is the best time to operate, as the fruits are charged with less humidity, the flavor is more concentrated, and those destined to be preserved keep better. This rule applies to all fruits.

"2d. *MODE OF GATHERING.*—The best method of gathering fruits consists in detaching them one by one with the hand. All pressure should be avoided as far as possible, as every bruise is followed by a brown spot which gives place to and brings on the rapid decay of the entire fruit.

II. PRESERVATION.

"The preservation of fruits can only be applied to those which ripen during the winter, and which, detached from the tree before the first frosts, are placed under shelter from the cold to complete their maturity. The grape only is an exception to this. Summer and autumn fruits are also preserved, but only by the aid of certain proceedings such as *drying*, and cooking more or less perfect, added to the exclusion of air or the addition of sugar—proceedings which result in discoloring the fruit and altering their flavor more or less sensibly. We can not here describe the different methods.

"To preserve the fruits of winter, it is necessary, first, to prevent the action of frost, which disorganizes them completely ; second, to retard the progress of their maturity in such a manner that a certain number of them will not ripen till towards the month of May in the following year. Experience has demonstrated that decomposition succeeds quite rapidly to complete maturity, and that it is impossible to prolong their preservation beyond this point.

"To obtain more or less perfectly the two-fold condition which we come to describe, depends upon the construction of the place in which the fruits are deposited, the fruit-room, and to the care which they receive.

"1st. *OF THE FRUIT-ROOM.*—The fruit-room will give the more satisfactory results in proportion as it fills the six following conditions :

"1. *That its temperature be uniformly equal.* It is by changes of temperature, which expand or rarify the liquids contained in the fruits, that fermentation is excited and the interior organization destroyed, phenomena from which result maturity or ripeness.

"2. *That this temperature should be eight to ten degrees above freezing.* A higher temperature favors fermentation too much. If, on the contrary, it is lowered to two or three degrees, this fermentation ceases and maturation becomes stationary. Thus we see fruits preserved five or six months in an ice-house. In this case the end aimed at has been exceeded ; for we are obliged, in taking them from the ice-house, to expose the fruits for a certain length of time to a higher temperature, in order to ripen them. The fruits thus preserved ripen afterwards with difficulty, and their quality is often found altered.

"3. *That the Fruit-Room be deprived of the action of the light.* This agent also accelerates maturation in facilitating the chemical reactions which produce this phenomenon.

"4. *That all the carbonic acid disengaged from the fruits be retained in its atmosphere.* This gas, it appears from experiments of COUVERCHEL, contributes powerfully to the preservation of fruits.

"5. *That the atmosphere be more dry than humid.* Humidity is also a condition necessary to fermentation; it diminishes the resistance of tissue in the fruits, and favors the effusion of its juices. It is, then, proper to avoid its accumulation in the fruit-room; but it must never be completely dry, for the fruits losing then, by evaporation, a considerable quantity of the aqueous fluids, wither, dry up, and do not ripen.

"6. *That the fruits are so placed as to diminish as far as possible the pressure which they exercise upon each other.* This continued pressure determines the rupture of the vessels and cells toward the point of pressure, the different fluids are mingled, and this mixture promotes the chemical combinations which result in maturity.

"We propose to construct a fruit-room to fulfil these conditions, in the following manner:

"We would choose a very dry soil, somewhat elevated, facing the north, and completely shaded from the sun by high plantations of evergreen trees. The dimensions are to be determined by the quantity of fruit to be preserved. That of which we give the plan (fig. 2) is 15 feet long in the inside, 12 feet wide, and 9 feet high. This will give place to 8,000 fruits, allowing each one to occupy 4 inches square. It is sunk 2½ feet in the ground; and if the soil is very dry, it may be 3 feet. This enables us the more easily to guard the atmosphere against the external temperature. To prevent surface water from accumulating in the surrounding soil and filtering into the fruit-room, the surface of the ground should descend from the walls, and these should be constructed of cement a foot above the soil.

"This fruit-room is inclosed by two walls, (A and B,) leaving between them an open space (G) about 10 inches wide. This stratum of air interposed between the two walls is the surest means of protecting the interior from the exterior temperature. The two walls are each 12 inches thick, constructed with a sort of mortar, or mud, made of clay and straw. This material is cheap, and on the whole a bad conductor of heat, and on this account preferable to common masonry. The walls are pierced with six openings—three in the inside and three in the outside walls—the first similar and exactly opposite to the last. The openings for the outside wall are —

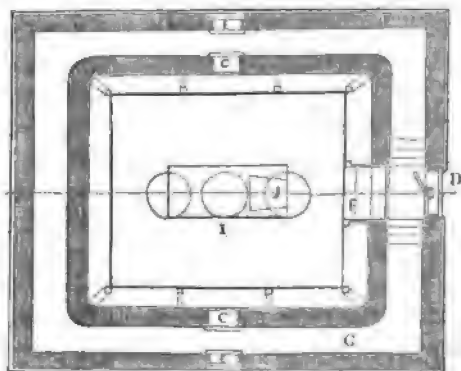


Fig. 2

"1. A double door (D): the outside door opens out; that of the interior inward, and it opens in two parts like a shutter. When the frosts are severe, the space between the two doors should be filled with straw.

"2. Two windows, (E,) about 20 inches square, placed on each side and opening at 18 inches from the soil, and closed by a double sash, of which the one opens out and the other in. The space between the two sashes should also be carefully filled with straw at the commencement of winter.

"The inside wall has a door (F) and two windows (C); but here the door is simple; the windows are also closed with two sashes, the outside one sliding in a groove and the other opening out.

"As soon as the fruits are collected in the fruit-room, the joints and openings around the windows should be filled with paper, to prevent the air from the space between the walls entering the fruit-room. The four windows are only intended to admit air and light necessary to dry and ventilate the fruit-room before gathering in the fruit. We shall presently see that it is easy to get rid of the interior humidity produced by the presence of fruits, without employing currents of air.

"The ceiling, sustained by beams, is composed of a layer of moss sustained by laths, and covered above and below with a layer of plaster; the whole being one foot thick. This mode of construction is necessary to exclude the influence of the exterior temperature.

"The roof is thatched a foot thick with straw, and the dormer may be used for storing fodder in; but the points of union between the dormer and outer wall must be perfectly close.

"The floor is of oak. The walls, and even the ceiling, should have a covering of boards. These precautions serve to maintain an equal temperature, to exclude exterior moisture, and to completely separate the atmosphere of the fruit-room from that without.

"All the interior walls, from within 18 inches of the floor to the ceiling, are furnished with board shelves, 2 feet wide, placed 10 inches apart. To facilitate the arrangement of the fruit, the upper shelves (A, fig. 3,) are made to slope downwards in front at an angle of 45 deg.; and this decreases as they come down, until the lower ones within four or five feet of the floor are horizontal.

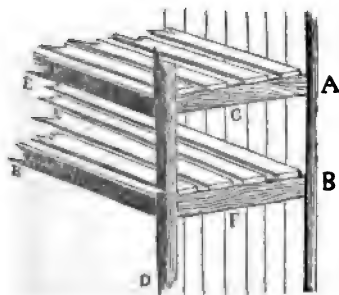


Fig. 3.

"The tables or shelves are all made of narrow strips about 4 inches wide; and to facilitate the circulation of air, about an inch of space is left between each strip. The shelves are fixed to the wall by brackets sustained in front by upright posts (D) placed $4\frac{1}{2}$ feet from each other. The cross-pieces (E) attached to the uprights, support horizontal laths (F) or oblique ones (G).

"In the center of the fruit-room we reserve a table (I, fig. 2,) 6 feet long and $2\frac{1}{2}$ feet wide, separated from the shelves by a space of 3 feet. This table serves to receive

the fruit temporarily, and has a narrow moulding round the edge to keep it from falling off. All the shelves have similar borders.

"Such is the mode of construction we propose for a fruit-room, by the aid of which we can easily obtain many of the results we have indicated as necessary; that is to say, it will enable us to maintain an equal temperature of 46 to 50 deg. Fahrenheit above zero, and that the action of the light is prevented. As for the other necessary conditions, we shall presently point out the means to secure them. In certain circumstances, much of the expense of a construction like the above might be avoided. If, for example, there were a subterranean cave or a grotto in a rock, a fruit-room might be established in either place, provided they be very dry. The interior fitting up would be the same.

"As the fruits are brought into the fruit-room, they are deposited on the table, which is covered with a thin layer of dry moss. There they are assorted; each variety is placed separate, and all unsound and bruised specimens are taken out. The sound fruits are left on the table two or three days, in order that they may part with some of their moisture. The shelves are then covered with a thin layer of dry moss or cotton, to prevent the fruits from being bruised by their own weight. We then proceed to wipe the fruits lightly with a piece of soft flannel, and arrange them in rows on the shelves, leaving a space of a fourth of an inch between each, and keeping each variety separate, and placing similar varieties next each other.

"The fruit-room may not only serve for the preservation of *kernel fruits*, but for *grapes*. The Chasselas varieties in particular keep well in this way. We proceed with them as follows: Each bunch is cleared of all decaying or unsound berries and fixed by the *point* on a small wire hook formed like an S (fig. 4). Thus attached it is less liable to decay, as the berries

have a tendency to separate from each other. The bunches are then hung by the other end of the S hook around one or two hoops (fig. 5) placed one above the other, and suspended from the ceiling of the room, and rendered moveable by two small pulleys. If it be desired to keep in this way a large quantity of grapes, space may be economized by substituting for the hoops wooden frames (fig. 6) about four feet square. These frames are furnished with strips or rods separated from each other by a space of 3 or 4 inches, and having on one side small pins to suspend the crotchets of grapes on. These frames are also fixed to the ceiling so as to occupy all the surface, and, like the hoops, to move up and down as may be necessary.



Fig. 4.

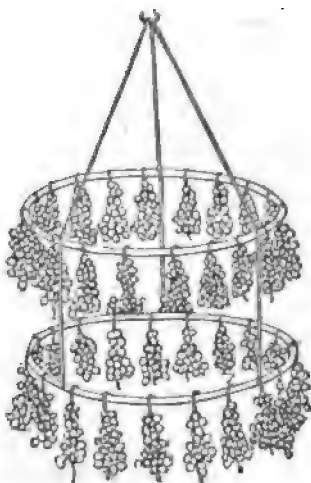


Fig. 5.

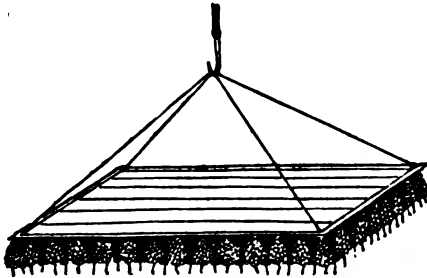


Fig. 6.

prive the fruits of their surplus moisture. After that, a dry and cold time is chosen to close hermetically all the openings. The doors must be opened no more, except when necessary to enter.

"Until the present time we have employed no other means to remove moisture from the fruit-room but by creating in the interior, currents of air more or less intense. This mode is attended with serious inconveniences for the preservation of fruit. In the first place it produces an equilibrium of temperature between the atmosphere of the fruit-room and the exterior, and this change is very injurious to the fruits. In the second place a glare of light is instantly admitted to the fruits, and this is no less injurious than the change of temperature. In fine, this vicious method should not be practiced unless the exterior temperature is not below the freezing point and the weather is dry. In the winter, however, the weather is generally the reverse of this, and the fruits have to be abandoned to a destructive moisture.

"To escape this difficulty, we advise the use of *chloride of calcium*. This has the property of absorbing so great a quantity of moisture, (about double its own weight,) that it becomes liquified after being exposed for a certain time to a moist atmosphere. Fresh lime has the same property of absorbing moisture, but at the same time it absorbs the carbonic acid set free by the fruits, and it is important to save this gas, as it aids materially in preserving them.

"To employ the *chloride of calcium*, a sort of wooden box should be constructed, (A, fig. 7,) lined with lead, (F,) about 18 inches wide and 4 inches deep. It is raised

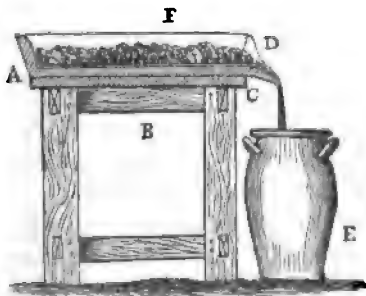


Fig. 7.

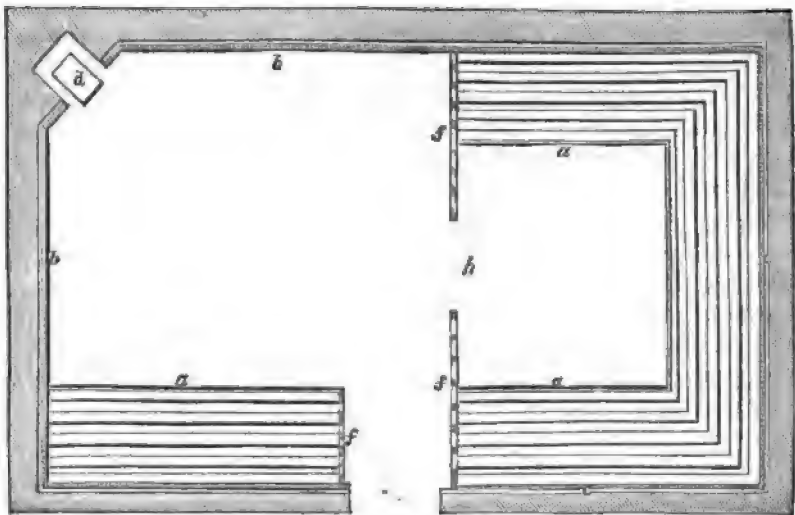
about 18 inches from the floor, on a small table (B) having one of its sides (C) about $1\frac{1}{2}$ inches lower than the other. At the middle of the lowest side of the box a small mouth is fixed for the liquified chloride to run over into a stone jar (E) placed below it. The chloride is spread in the box in small porous particles, very dry, and about 3 inches thick; and if the quantity employed be entirely liquified before the fruit is consumed, a fresh supply may be added. About fifty pounds applied at three times is sufficient

for a fruit-room such as the one described above. The liquid which results from this

operation should be carefully saved in the jar, and be kept covered until the following season. When the fruit-room is filled anew, the liquid may be put in a brass kettle and placed over the fire, where it will soon evaporate to perfect dryness, and may be employed again in the same manner as before.

"Such are the cases necessary to fill the conditions we have indicated for the preservation of fruits. The fruit-room should be visited at least once in eight days, to remove the fruits which begin to decay, set apart those which are ripe, remove the decaying berries from the grapes, and renew the chloride of calcium."

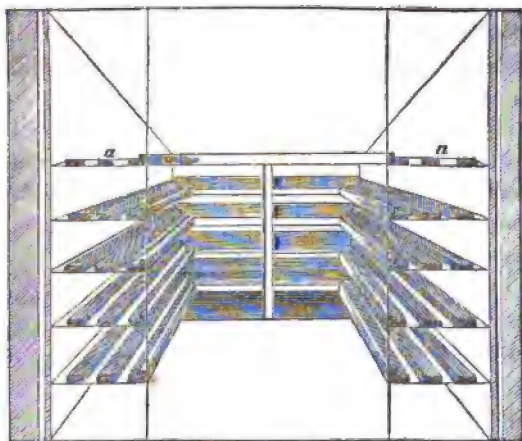
In the *London Gardeners' Chronicle* Mr. ROBERT THOMPSON gives the following description and plans of the fruit-room of a gentleman near London, who has for several years exhibited pears in fine condition at a season when the same varieties are generally gone. It illustrates the leading principles to be observed in building a fruit-room; but it must be remembered that in our Northern States at least, greater precautions must be taken to prevent freezing. Thick walls with air spaces, or filled with some non-conducting material, are among the essentials in this regard.



SCALE OF 1 1/2 FEET.

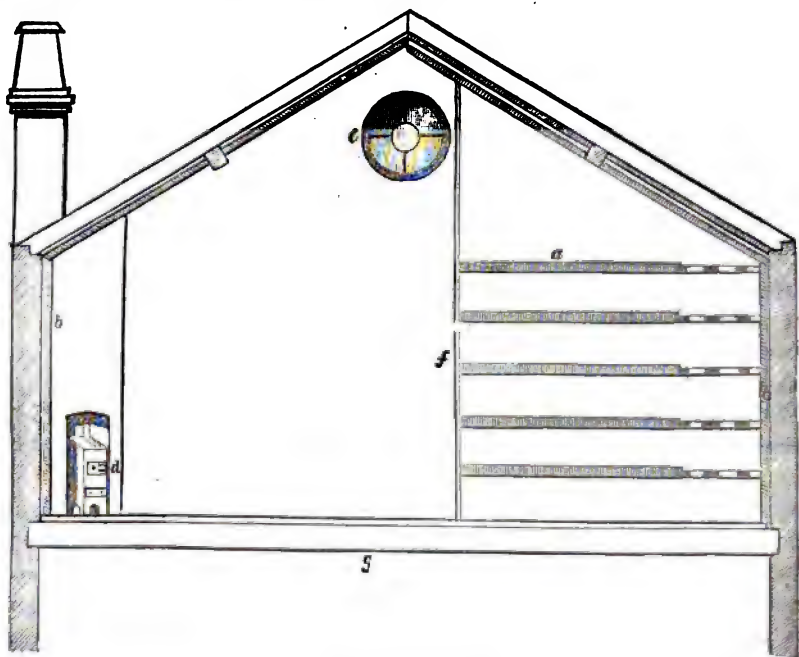
PLAN OF MR. MOORMAN'S FRUIT-ROOM.

"DESCRIPTION AND PLANS OF MR. MOORMAN'S FRUIT-ROOM.—The room was not originally constructed for a fruit-room; but by a little adaptation Mr. MOORMAN has succeeded in rendering it a most excellent one, as is proved by the prizes awarded for the productions exhibited from it,—not in any one year, but repeatedly, year after year. It is a partitioned-off portion of a loft which extends over a coach-house and stables, and is that part which is above the coach-house. It was originally fitted up for a harness-room, the walls, as is usual in such places, being lined with wood. The roof is slated. The range of building is detached, and faces the southwest.



INTERIOR VIEW.

"It will be observed that there is a cavity (c) between the boarding and walls. This, I believe, is an important circumstance, and so is the wooden lining, because air and wood are known to be slow conductors of heat. The ceiling on the north side is double, and the floor is wood above a ceiling. We may therefore conclude that a uniformity of temperature in the interior of the room is insured to a considerable extent. There is a small stove, (d,) but it is seldom used, and never with the view of warming the air of the room, unless the temperature is actually below freezing. The fruit is therefore kept cool. The swing-window (e) is occasionally a little opened;



LONGITUDINAL SECTION.

Explanation of the letters. — a, Shelves made with battens, $1\frac{1}{2}$ inch wide and $1\frac{1}{2}$ inch apart. b, Close boarding around the sides of the room. c, Air space between the boards and the wall. The roof has also an air space on the north side, between the two plaster ceilings, as shown on the section. d, Stove. e, Circular window hung on pivots, and fitted with a roller-blind. f, Partitions of green wood, similar to the shelves. g, Small stove under the stove.

but it is at all times covered with a roller-blind, so that the fruit is kept in the dark. A little fire in the stove, air being freely admitted by the window at the same time in a dry day, is useful for speedily removing any damp which may arise from the fruit. The shelves (*a a*) have a layer of clean-drawn straw laid across them; on this the fruits are placed singly.

"From a consideration of all the above details, it may be inferred that if a fruit-room be built over a place where there is a free circulation of air, its roof double ceiled, the walls lined with wood, a cavity being left between these two, it will possess the essential properties of the one under consideration.

"The more important principles necessary to attend to, with regard to the long-keeping of fruit, are uniformity of temperature, coolness, and darkness. If the temperature is uniform, there can be little or no deposition of moisture on the surface of the fruit; but if the air of the room should be say ten degrees warmer than the fruit, then the relative coldness of the latter will cause a condensation of the moisture contained in the air in contact with the fruit, just as a cold glass becomes dewed over when brought into a warm atmosphere. If the air is indeed very dry, then a proportionately greater difference of temperature is necessary to produce the above effect; but in winter the hygrometer seldom requires to be cooled more than a few degrees before it indicates a deposition of moisture. Fruits with smooth, glossy skins, in close contact with the cold substance beneath them, are those most profusely covered with moisture from the above cause. In russeted varieties, their dry, rough coats serve as non-conductors of heat, and hence less moisture is deposited on them. When the air becomes colder than the fruit, a contrary action—that of evaporation—takes place, and the surface of the fruit becomes dry. But this wetting and drying must prove very injurious, while its cause—alternations of temperature—must likewise affect the specific gravity of the juices of the fruit. Mr. MOORMAN's fruit is not exposed to such vicissitudes; for when the weather becomes frosty, it is several days before the thermometer in his fruit-room is affected as much as one degree.

"It may be remarked that in giving air, a period of the day should be chosen when the thermometer outside indicates the same temperature as that in the room. No deposition of moisture can then take place in consequence.

"With regard to coolness, it is well known that this condition is favorable to the long-keeping of fruit; for we act on the contrary when we wish to render any variety fit for use before its usual time. The fruit-room in question must be cooler on an average than if it had been on the ground; for the latter, under a building particularly, is much warmer than the air in winter.

"Light accelerates the maturity and ultimate decay of fruit exposed to its influence. If the soundest specimens are picked and placed opposite a window, they soon become much inferior in appearance, compared with those from which the light is excluded, all other circumstances being the same. In Mr. MOORMAN's fruit-room the light is excluded by a blind, even when air is given.

"By such arrangements as those above detailed, Mr. MOORMAN keeps the *Marie Louise* in fine condition till after Christmas. He possesses a selection of the best

varieties of pears, which he grows chiefly on espaliers, which are well managed by his gardener, Mr. TUCKER, in the Clapham-road. He had some remarkably handsome specimens of the *Winter Nelis* in his fruit-room in January, much larger than that excellent variety usually grows. We have also seen very large specimens of the *Marie Louise*, grown at his seat at Box Hill, in Sussex. The tree which produced them is trained against the gable end of a barn, about a quarter of a mile from the sea, and this tree is exposed to the strong sea-breezes from the southwest. It was planted in good soil, and a spring below it was discovered when digging the hole for the compost, previous to the tree being planted.

THE GOVERNOR WOOD CHERRY.*

DECIDEDLY the most successful attempt made at raising seedling fruits by any individual in this country is that of Dr. J. P. KIRTLAND, of Cleveland, Ohio, who has produced no less than twenty-eight varieties of excellent cherries. They were all briefly described by that gentleman himself in the March number of the current volume of the *Horticulturist*. Since that time a "cherry festival" has been held at Cleveland, and the merits of the cherries, examined on the trees as well as on the tables, freely and fully discussed and criticised by the most competent pomologists of the Western States; of the results we have already given some account. This instance of extraordinary success is encouraging in the highest degree, and can hardly fail to induce similar experiments on other fruits and in other parts of the country.

Throughout a large portion of this country, both in the north and west, the finer cherries are too tender for the climate, and this leaves a field open yet. If we could by hybridization obtain varieties possessing the excellence of the *Bigarreau*, joined to the hardiness of the *May Duke*, what a gain it would be! We know of no reason why we cannot. Among all Dr. KIRTLAND's cherries we have seen none that equals, in our opinion, in beauty of appearance and delicacy and richness of flavor the *Governor Wood*. We have had it in bearing some four or five seasons, and it has been uniformly fine: so it has proved in other places, as far as our knowledge extends. We said, the first year it bore, that it was one of the finest table fruits we ever saw; and to-day we consider it as having no superior. It will not be so popular in market as the *Black Tartarian*, *Yellow Spanish*, *Napoleon*, or some others, but every amateur will desire to have it in his collection. The fruit is above medium size, or rather large, round, of a beautiful amber color, becoming a clear cherry red when fully ripe; flesh tender, like *Downer's Late*, and others of that class, juicy, sweet, and fine flavored. The tree an erect, regular, handsome grower, hardy and very productive—the branches being literally covered with fruit, as though they were tied on; the fruit we think, too, is the least liable to rot, and hangs longest sound on the tree of any variety we know, ripening at the same time. Season, here, latter end of June and beginning of July; nearly same season as the *Yellow Spanish*—a few days earlier.

* See *Horticulturist*. The specimen is a little under the size of the engraving.

WINDOW GARDENING AND PLANT CASES.*

"THE Hopean apparatus is thus described in the *Gardener's Chronicle* :—'A flat dish of porcelain had water poured into it; in the water a vase of flowers was set; over the whole a bell-glass was placed, with its rim in the water. This was a Ward's case in principle, although different in its construction. The air that surrounded the flowers, being confined beneath the bell-glass, was constantly moist with the water that rose into it in the form of vapor. As fast as the water is condensed, it runs down the sides of the bell-glass back into the dish; and if means are taken to inclose the water on the outside of the bell-glass,' (which can easily be done by having the bell-glass as large as the porcelain dish,) 'so as to prevent its evaporating into the air of the sitting-room, the atmosphere around the flowers would remain continually damp. What is the explanation of this? Do the flowers feed on the viewless vapor that surrounds them? Perhaps they do; but the great cause of their preserving their freshness is to be sought in another fact. When flowers are brought into a sitting-room, they fade because of the dryness of the air. The air of a sitting-room is usually something drier than that of the garden, and always much more so than that of a good greenhouse or stove. Flowers, when gathered, are cut off from the supply of moisture collected for them by their roots, and their mutilated stems are far from having so great a power of sucking up fluids as the roots have. If, then, with diminished powers of feeding, they are exposed to augmented perspiration, as is the case in a dry sitting-room, it is evident that the balance of gain, on the one hand, by the roots, and of the loss, on the other hand, by their whole surface, can not be maintained. The result can only be their destruction. Now, to place them in a damp atmosphere is to restore this balance; because, if their power of sucking by these wounded ends is diminished, so is their power of perspiring, for a damp atmosphere will rob them of no water: hence they maintain their freshness.

"The only difference between plants in a Ward's case and flowers in the little apparatus just described, consists in this, that the former is intended for plants to grow in for a considerable space of time, while the latter is merely for their preservation for a few days, and that the air which surrounds the flowers is always charged with the same quantity of vapor at all times in the dish and bell-glass, while in a Ward's case the quantity of vapor will vary with circumstances, and at the will of him who has the management of it.'

"This very excellent quotation comprises all that can be usefully said on the subject of preserving cut flowers in rooms, and ought to be carefully studied by every lady who takes pleasure in having flowers in her room. We have long seen expensive glass shades placed over artificial flowers, and over delicate specimens of natural history, with a view to keep the dust from them, while no such precaution was taken to preserve natural flowers from the same evil, much less to prolong their existence in a fresh and perfect state.

"It would be of little utility for us to attempt giving specimens of such apparatus; the description given shows the principle completely. We may, however, remark that porcelain dishes might be made with a shallow groove within their rim, into which the glass shade might be made to fit, both for the exclusion of air and also to prevent the evaporation from the water from mixing with the air in the room;—not, however, that the small quantity of aqueous matter discharged by evaporation from such dishes would at all affect the air of a large sitting-room; perhaps it would rather have a beneficial effect, especially in winter, when large fires are maintained, which, it is well known, rob the air of a room of its moisture, and render it unwholesome for the inmates.

"Closely connected with Wardian Cases is the subject of plant tables for rooms, certainly a department of drawing-room furniture hitherto much neglected. The following specimens may afford ideas for further improvement, should they not be sufficiently complete in themselves.



Fig. 12.

"Fig. 12 is a flower-basket of wirework painted green; or, still better, the basket-work part may be made of brass wire, and left of its natural color. It is mounted upon a mahogany or oak clawed pedestal set on castors. A shallow zinc tray is placed within, to prevent the water that may pass through the pots from falling on the carpet. This tray, like all others used for the same purpose, as well as in Wardian cases, should have a small waste-pipe attached to the lower part of its bottom, and regulated by a brass cock, so placed, and of such a size, as not to be seen from any part of the room. This is intended for withdrawing the water that may accumulate in them, and so preventing its overflowing, as it may not be convenient at all times to remove the whole of the plants out of the table. The plants are to be packed in moss, kept perfectly green and fresh on the surface.

"Figs. 13 and 14 are more adapted for cut flowers than for plants in pots. They are made water-tight within, with the usual provision for drawing it off every day, that fresh water may be supplied. The top is covered with a portable fine brass-wire grating, the meshes

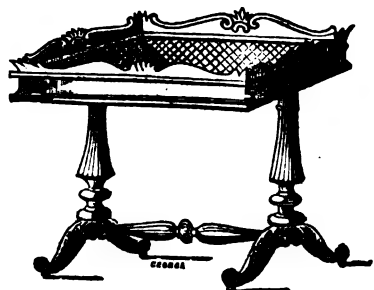


Fig. 14.

being about half an inch square, to support the flowers, and to keep them in an upright position. Fig. 15 is an example entirely composed of mahogany, rosewood, satin-wood, or oak, according to fancy. The interior of the box is lined with thin lead, zinc, or copper, and provided with a waste-pipe. The basket-work round the top, in this case, should be brass, rolling rather outwards at top, and only from four to six inches



Fig. 13.

inches in depth, as the framework of the table is presumed to be deep enough to hide the pots: the whole of the basketwork should appear above the surface of the moss. This table may be used for cut flowers of dahlias, pinks, or carnations, half of the box being filled with moss, and filled up with fine white sand, into which the flowers are to be stuck nearly to their calyx. If tastefully arranged with regard to the harmony of colors, such a table will have a pretty effect, and the flowers will last for several days, if not exposed too much to the action of the air. All stands for cut flowers should be provided with glass shades, to be put on at night when the company retires, and removed just before breakfast in the morning, to secure them from dust, which must necessarily arise in doing up the rooms in the mornings, and also to protect them from air. The moss and sand being saturated with water when put in, the flowers will remain much longer than if placed in water alone.

"Fig. 16 exhibits a very elegant flower-stand upon a principle different from those already noticed. It was the invention of Mr. SAUL, of Lancaster—a name well known, from his many and excellent contributions to the horticultural periodicals, extending now over many years. It was published in the second volume of the *Magazine of Botany*, and described as follows: 'The very high state of perfection to which casting in iron has arrived is taken advantage of for ornamental purposes. The present flower-stand is worthy of notice, and will not be very expensive. There are four movable baskets, *a a a a*, which move round on

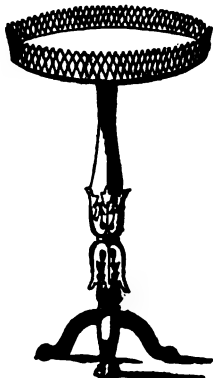


Fig. 17.

the rod *b*, and may be placed any height and any figure that may please the possessor, to suit the situation in which it is to be placed. The rod *b* moves up and down in the pillar *c*, till the branch rests at the top of the pillar at *d*. The branch *e* is movable, and may be taken off the rod, so that the brackets may be slipped off at the top, leaving only one or two, according to the number of plants intended to be placed thereon. The stand is bronzed, which gives it an elegant appearance, either fit for a drawing-room or any other place. The bottom *f* is made of different kinds of ornaments, to suit the

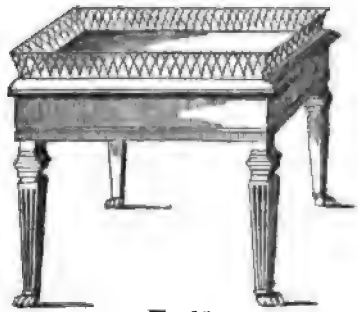


Fig. 15.

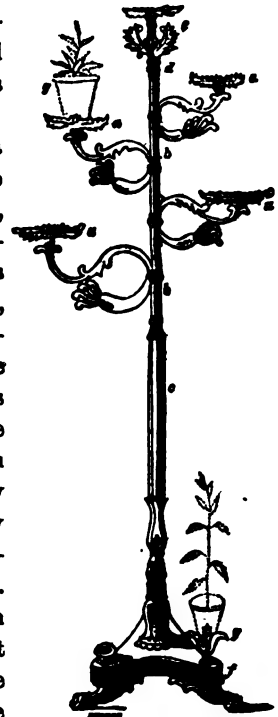


Fig. 16.

aste of the purchaser. The pots *g g* are merely placed to show that they rest on the sashes fixed at the ends of the brackets.'

"Fig. 17 is another specimen of a flower-basket upon a stand, with basketwork of brass enclosing a shallow vessel for the reception of water. The form is elliptical, and, as an economical arrangement, the top may be removed, and replaced with the top of a circular or elliptical table.

"The amateur propagating-box is exemplified by the annexed diagram, fig. 18. They are much used in Denmark by those who have no regular greenhouse, pit, or

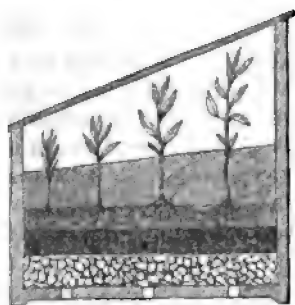


Fig. 18.

frame, and are both ornamental and useful, and seem to attract the same attention the Wardian cases do in the drawing-room in this country. The case here represented is three feet long, fifteen inches wide, one foot high in front, and eighteen inches high at the back. The sides are formed of boards, and painted. The top is covered with glass, and the whole elevated to a convenient height upon a stand. The bottom is covered with drainage, over which is a stratum of moss, one of sand, and a third of mold. The cuttings are made and planted in the usual manner, for it is for the propaga-

tion of cuttings that these cases are intended. The whole is well watered and the glass shut down, and afterwards managed exactly as Wardian cases are with us. With us a species of cultivation of the already formed plant affords the gratification, but the Danish ladies take the subject up a step earlier, and produce the perfect plant from the cutting or slip—each in their way equally gratified with their success, and of course equally annoyed should failure ensue. The form of this kind of propagating-box may be varied, and elegant and ornamental forms may be indulged in."

NEW AMERICAN PEARS.

THE HOSENSCHENK PEAR.—Messrs. THORP, SMITH, HANCHETT, & Co., of Syracuse, were kind enough to send us specimens of this fruit, but they were received in our absence, and the drawing and description preserved for us were too imperfect to enable us to describe it fully and accurately. The specimens, too, were imperfect, having broken stalks, and the flavor was impaired by carriage. We are very favorably impressed with this pear; but from what we have learned of it from Mr. CHAS. DOWNING, and others who have fruited it, we do not believe it will rank with our very best summer fruits. It is, however, well worthy of extensive trial.

We subjoin the communication of Messrs. THORP, SMITH, HANCHETT, & Co., written by Mr. FAHNESTOCK of that firm:

"The *Hosenschenk Pear* is known by many names; in Pennsylvania, such as *Butter Pear*, *Smokehouse*, *Schenk's Pear*, *Watermelon*, &c. *Schenk's August* is a different pear,

although by some called the same; it is a much more thrifty grower, with much darker wood than the *Hosenschenk*. Having seen a very flattering description of this pear by Dr. BRINCKLE, of Philadelphia, and having had several communications in relation to the same from two of our Pennsylvania friends, I brought the character of the pear before our firm, and we decided last season to propagate it largely. We now have a very fine stock. The fruit you saw was sent us from the bearing tree in Pennsylvania, from which our grafts and buds came, and we esteem it not only by far the *largest pear* of its season, but the *best*. It is as good as the best *Onondaga* we have ever tasted, and, in our opinion, fully equal to the *Virgalieu*, of which it is supposed to be a seedling. Size large, very juicy, melting, and refreshing, and will be a decided favorite, as soon as made known to the community. How so large and fine a pear, ripening in August, could be confined to so limited an area, we are unable to account for. The original tree is from forty-five to fifty years old, on the farm of Mr. JOHN SOHENK, of Weaver township, Penn., who raised three trees from seeds found in one pit, all of which came into bearing: one proving worthless, one of second rate fruit, and the other, the fruit we sent you, called *Hosenschenk Pear*, which is still thrifty, bearing annually large crops, and still growing near the smokehouse, from which it was long known as the *Smokehouse Pear*. Mr. SOHENK is represented as a man of singular character; much devoted to raising new trees and plants, and neglected his farming operations in order to attend to the 'smelling of water.' He went far and near for those who desired his services, and was generally very successful in finding under-streams. He wore wide 'trowsers,' and used to say that during his lifetime these same wide-legged pantaloons had been three times in fashion. Hence the name '*Hosen*'-schenk, meaning '*breeches*'-schenk. We are indebted to our friend Mr. J. B. GARBER for the above history.

We have sent to Messrs. HOVEY & Co., Hon. M. P. WILDER, LUTHER TUCKER, Esq., Dr. WENDELL, and the Cincinnati Horticultural Society two specimens each of the same lot of pears sent you, and at the same time. These pears were picked green and hard, and packed in buckwheat chaff, and forwarded by express from Pennsylvania to us. When they arrived, unfortunately, the chaff imparted to them quite a musty taste, and they were by no means a true test. Our friend also apologizes for the size being small, as the tree had a very heavy crop on it. I give you short extracts below from some of those to whom we have sent specimens; and as we have characterized it not only the largest but best pear ripening in the month of August, and nearly equal to our best in flavor, you can at once judge how our views compare with theirs.

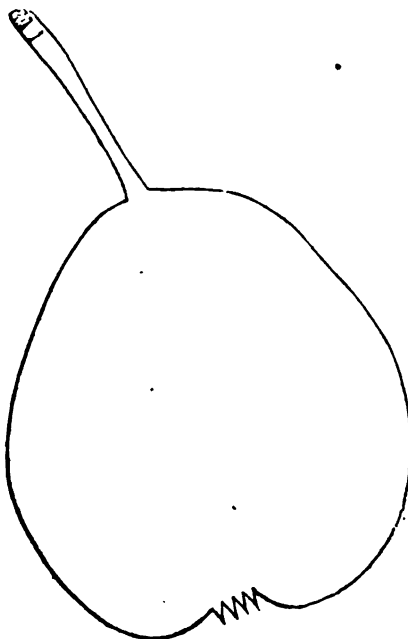
"We make the following extract from a letter from Messrs. HOVEY & Co., of Boston: 'Dr. BRINCKLE had given us some information about the *Hosenschenk*, and we supposed it might be a good pear, but we are happy now to have good evidence that it is decidedly an acquisition to our early kinds. Those you have sent, undoubtedly, are not fair samples, but they show it has a *very melting* and *juicy* flesh, and only lacking more flavor to give it a rank among the best pears we possess. We have made a cut of it, and shall be pleased to learn its full history, &c.'

"The following is an extract from the letter of Hon. M. P. WILDER: 'I received with pleasure the specimens of the *Hosenschenk Pear*. I have heard something of this fruit, but was not aware of its being so *early*, or so *handsome* and *large*. The flesh is very *tender*, *juicy*, and *melting*; the flavor mild and pleasant; and were it a little higher and more specific, this variety would, without detriment, compare with our favorite *Bartlett*. From the specimens sent, I should judge that it would be a valuable early market pear. Please send me five of the best trees you can spare.'

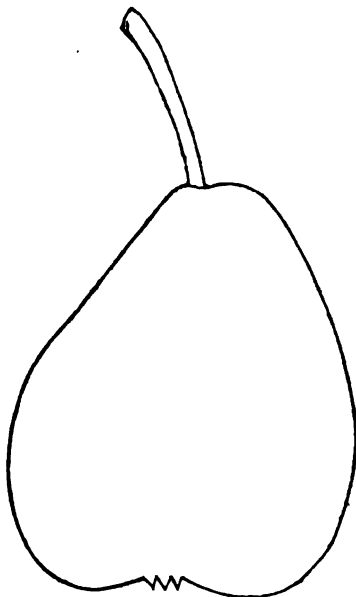
"We have a letter from Dr. WARDER, of Cincinnati, in which he says that Dr. MOSHER, President of their society, spoke to him in high terms of this pear. The Doctor was absent from Cincinnati, but he will no doubt give the opinion of the committee."

THE PULSIFER PEAR.—We are indebted to SMILEY SHEPHERD, Esq., of Hennepin, Ill., for specimens of this native Illinois variety. After being packed for about ten days, they reached us on the 10th of August in tolerable condition. We are inclined to class this pear in quality and size with the *Bloodgood*; and as it is described as being very hardy and productive, it will undoubtedly prove valuable, especially in the West. Mr. SHEPHERD gave us the following account and description of this fruit in 1850, published at that time in the *Genesee Farmer*:

"In the spring of 1848, Dr. JOHN PULSIFER, of Hennepin, planted in his garden a pear seed, (kind unknown,) which sprung up, grew, and the present season bore a crop of fruit of great merit in different respects. Growth of tree—upright and vigorous. Shoots—dark olive. Buds—round, full,



OTT PEAR.



PULSIFER PEAR.

and prominent. Leaves—dark green, ovate, reflexed. Size of fruit—hardly medium. Shape—pyriform. Stem—short and curved. Calyx—small, open, set in a shallow depression. Skin—dull golden yellow, covered with an open network of slight russet. Flesh—white, melting, juicy, sweet, and delicious—much like, but superior to, *Louise Bonne de Jersey*. The time of ripening, the present backward season, was the first half of Aug."

Mr. SHEPHERD says now: "The experience of two years more has but confirmed us in this opinion of its superior merit—first, for early and prolific bearing; second, for high and excellent flavor; and third, for hardiness and vigor of growth." We commend this pear for trial in other sections of the country.

THE OTT PEAR.—This is a native Pennsylvania pear, originated on the grounds of Mr. SAMUEL OTT, of Montgomery county, Pa., said to be a seedling of the *Seckel*. It

was introduced to notice a few years ago by Dr. BRINCKLE. We have fruited it this season, having it ripe on the last of August. It proves to be a very fair and excellent fruit, ranking with the best summer pears. Size—rather small, roundish-obovate, regular. Skin—greenish yellow, marked with a thin russet and with a marbled red cheek generally. Calyx—rather small, in a narrow, shallow basin. Stalk—one and a half inches long, rather slender, and inserted in a flattened end. Flesh—white, rather coarse, melting, rich, and perfumed, with somewhat of the flavor of the *Seckel*. Our specimens were from a double worked tree. The tree is a fair grower, and, judging from two or three years' trial, succeeds well on the quince. This will, we think, be a generally esteemed amateurs' pear, but will be found too small for our markets generally.

THE ROSY HISPA AND THE DROP-WORM.

BY PROF. T. W. HARRIS, CAMBRIDGE, MASS.

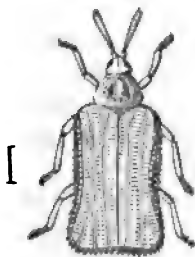
[IN the latter part of the month of August we were traveling through Jefferson county, N. Y., and observed through the whole country that the Basswood trees, which are very abundant in that part of the country, looked as brown and dry as though some terrible blight had struck them all dead. On examination we found this appearance was owing to the leaves being all devoured, leaving but the skeleton of fibres; not a leaf had escaped throughout the immense forests which we passed on a journey of some thirty miles or more. The insects had mostly disappeared, but after a long and eager search we found one tree, the leaves of which, though reduced to skeletons, were yet thickly covered with the insects. We immediately sent specimens to Prof. HARRIS, requesting such information as he possessed respecting them, and he has very kindly complied. Insects that appear in such swarms, and commit such havoc, should be known. The other insect, the "Drop-worm," described by Prof. HARRIS below, was sent us from Tennessee by Mr. ROBERT MESTON, whose note we publish among correspondence.—ED.]

Among the leaf-beetles that are injurious to vegetation are those belonging to the tribe called *HISPADÆ*. Such are the little insects which you lately sent to me, and which you found to have destroyed the foliage of the Basswood, or American Linden (*Tilia Americana*), in Jefferson county, N. Y. A variety of the same insect attacks the leaves of the White Oak, and occasionally those of the Apple tree, also. These leaf-beetles are described in the second edition of my Treatise, pp. 105 to 107; and a more full account of them, with figures of the grub and chrysalis, will be found in the first volume of the *Boston Journal of Natural History*, pp. 141 to 151.

The day before your letter came to hand, I found one of these beetles, which had just emerged from a leaf of the Linden, and I saw several other leaves on the same tree that had been eaten by insects of this kind. In the summer of 1851 the White Oaks in some parts of Long Island suffered very much from their attacks; and, with

this communication, you will receive one of the leaves, showing in what way and to what extent they were affected.*

Your insect is the Rosy Hispa, or *Hispa rosea*, of WEBER, otherwise called *Hispa quadrata* by FABRICIUS, and *Hispa marginata* by SAY. The accompanying rude and



very magnified sketch will give an idea of the form of this pretty leaf-beetle, and the line at the side of it indicates its natural size, which rarely exceeds one-fifth of an inch in length. Its body is light red above, ornamented with short blood-red lines, and is mostly blackish beneath. The antennae are black, and the legs are reddish-yellow. The thorax is rough with small indentations, or punctures, as they are called; the wing-covers are notched around the outer edges, have raised ribs upon them, and deep punctures in the intervals. The Rosy Hispa may be found abundantly in May and June on the leaves of the Shad-bush, or *Amelanchier Canadensis*, and on other shrubs of the same family, the leaves of which it devours. The variety which inhabits the Oak differs in being of a reddish-yellow color, ornamented with blackish-red lines. This difference may be occasioned by its food, or by other causes of an accidental nature.

The female Hispa deposits her eggs, for the most part, singly, on the upper surface of the leaves. These eggs are glued fast to the leaves, and are covered with a rough, blackish crust. The grubs, hatched from the eggs, immediately penetrate into the pulpy substance of the leaf, which they devour, leaving the cuticle, or skin of the leaf, both above and beneath, untouched. The part of the leaf thus, as it were, undermined, becomes dry and brown, and through the semi-transparent cuticle, when held between the eye and the light, the grub may be seen in its burrow. The grub comes to its growth toward the end of July, and then measures from one-fifth to one-quarter of an inch in length. It is somewhat flattened, and tapers toward the hinder extremity. Its color is yellowish-white, except the head, the first segment, and the tail, which are blackish. It has six legs, a pair beneath the first, second, and third segments; and on each of the remaining segments, both above and beneath, except the last, there is a transverse horny spot, which is rough, like a rasp. The sides of these segments, also, are prominent, and are surmounted each with a little brownish tubercle, or wart. Early in August the grub is transformed to a chrysalis within its retreat. The chrysalis, which is whitish at first, finally becomes brown. Like the grub, the sides of its body are prominent, and there are transverse rasps on the back and belly. In about one week afterward the insect casts off its pupa skin, and comes out a fully formed beetle, which has only to force a passage through the thin cuticle of the leaf in order to escape into the open air. The insect, probably, passes the winter in the beetle form in some place of concealment. Such is briefly a history of the transformations of this little *Hispa*.

The caterpillars, which, together with their cocoons, you sent to me, with the information that they were very destructive to the Arbor Vitæ, Cedar, and other resinous

* Quite similar to the manner in which the Basswood leaves are eaten.—Ed.

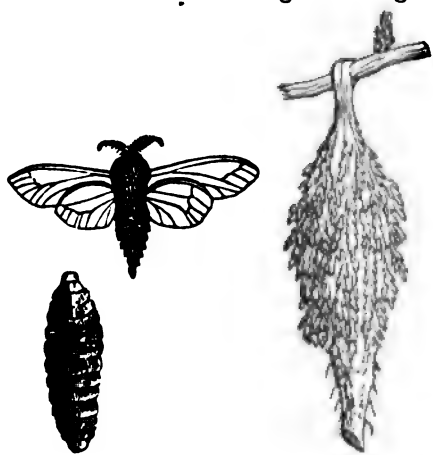
plants in Tennessee, are the drop-worms, or basket-worms, referred to on page 819 of my Treatise. To their destructive powers I can testify from my own sorrowful experience; a fine Arbor Vitæ tree, on which I had placed, in May, 1850, some of the cocoons received during the previous autumn from Philadelphia, not having yet recovered from the effects of the ravages of the insects, though the latter were limited to one summer. These drop-worms are exceedingly curious and interesting in all their habits and transformations, the history of which might form the subject of a long memoir. But neither time nor space will permit me to offer any more than a very short sketch of their history, which is drawn up from notes written in the years 1849 and 1850; when I had a colony of the living insects in keeping.

These insects inhabit the Swamp Cedar (*Cupressus Thyoides*), Arbor Vitæ (*Thuja occidentalis*), Larch (*Larix Americana*), and Hemlock (*Abies Canadensis*), with other resinous trees; but occasionally they attack the Linden, the Maple, and even fruit trees. They are common in the Middle and Southern States, and probably most of the Western States also; but hitherto they have not been discovered in New England. They belong to Mr. GUILDING's American genus *Oiketicus*; and, as they do not seem to have received a scientific name, I shall venture to give them that of *Oiketicus coniferarum*, from their preference to trees of the cone-bearing tribe. The species is probably the same as the one noticed by my lamented friend, the late Mr. EDWARD DOUBLEDAY, in *Newman's Entomologist*, No. 7, pp 97-98; but the male insect does not agree with the figure, copied from one of ABBOT's drawings in the same work, nor does it correspond any better to GUILDING's figure of *Oiketicus McCayi*, though about the same size.

As soon as the drop-worms are hatched, they make and conceal themselves in little silken cases, open at each end, and covered externally with bits of leaves, twigs, &c. These cases are enlarged, as the insect increases in size, by the addition of more materials within and without, and finally become oblong oval pods, with long somewhat cylindrical extremities. The inhabitant carries its house about on its back, as a snail does its shell, when it is moving and feeding; fastens it by a few threads when it wishes to rest; or lets it drop by a thread when it wishes to descend from one branch to another: hence, in Philadelphia, where these insects are abundant, they have acquired the name of drop-worms. These worms attain their full size by the middle of September, and then fasten the upper end of their cases to a twig of the tree by a strong silken band. The weight of the case, with its elasticity, closes the upper orifice, from which the worm has been accustomed to protrude its head and fore legs when feeding; the insect then turns round within its pod, so as to direct its head toward the lower cylindrical orifice, and thus awaits its change to a chrysalis. The worms which produce the female insects are much larger than those of the males, and there is the same difference in the size of their pods and of their chrysalids. Female worms attain the length of one inch and a half, those of the males only about one inch. The head and fore part of the body are white, spotted with black; the rest of the body is livid or blackish. The first three segments are each provided with a pair of stout jointed claw-like legs. The tail and four intermediate segments are

furnished with a pair of very short holders, or prop-legs. The male chrysalis is a little more than six-tenths of an inch long, of a dark brown color, and exhibits the sheaths of the wings, and limbs of the future moth, which escapes from it toward the end of September or early in October, immediately before which the chrysalis forces itself half way out of the lower end of its case. The female chrysalis is nine-tenths of an inch long, or more, of the same color as that of the males, but without any vestige of wing-sheaths or limbs. There is a prominent ridge over the fore part of the body. When the included female is matured, the skin of the chrysalis splits at the ridge, so as to form an opening in the shape of the letter T, and through this opening the approaches of the male moth are made, the female remaining all the while not only enclosed in her pod, but also encased in the skin of the chrysalis. In this skin, also, she lays her numerous eggs, gradually withdrawing her emaciated body as she fills the pupa skin, and finally closing the upper part of the skin with a thick layer of fawn-colored down, stripped from her own body. Having finished her labors, she crawls out of the pod, entirely shriveled up, drops off and dies, or more rarely perishes at the mouth of her pod. She is found to be entirely destitute of wings, and her legs are extremely minute, and resemble little tubercles. The male moth, on the contrary, is fully provided with wings and limbs. Its body, which measures rather more than half an inch in length, is covered with long blackish-brown down. Its wings are semi-transparent, and are very scantily clothed with blackish scales, which are thickest on the margins and veins. The white spot, represented by Mr. ABBOT on the fore wings of his figure, is entirely wanting in all the males that I

have seen. The antennæ are curved at the tips, and are doubly feathered from the base to beyond the middle. The tongue is not visible. The wings expand one inch and one-tenth, or more. The male moths are very impatient of confinement, and keep in constant motion, which renders it very difficult to obtain perfect or unrubbed specimens. The eggs remain secure in the shell or skin of the female chrysalis, enclosed in the suspended pods, through the winter, and are hatched in the spring when the trees are well clothed with leaves, upon which the little worms, having left the pods, immediately disappear, and each one



begins to cover its tender body with a silken and leafy case. The figures represent one of the pods or cocoons, suspended by a twig, when the insect has prepared for its final transformation; also a male moth, both of the natural size.

Foreign Notices.

PYRAMIDAL CHINA ASTERS.—Among all the beautiful annuals cultivated at the present time, we know of none more worthy of attention than these charming pyramidal Asters, recently introduced by the French florists. M. TRUFFANT, of Versailles, who has brought their culture to a high state of perfection, gives a very full account of his management in the *Revue Horticole* for July, 1853. The *Gardeners' Chronicle* condenses a part of it, as follows, leaving out some very instructive remarks on the saving of seed, with a view to the improvement of both habit of the plant and form and colors of flowers.

He sows the seeds in the open ground, and in pots or pans under cloches (bell-glasses), or in frames. *The sowing in the open ground* is made in good rich well-worked soil, in the last fortnight of March. The seeds are very thinly covered with fine decayed leaf-mold, and slightly watered, then covered with bell-glasses or frames. These are covered with straw mats when the nights are cold, and slightly shaded from the sun's rays when the days are bright.

If the weather prove favorable, the plants will appear in about ten days. Air is then gradually admitted, and more fully as the plants acquire strength, in order that they may become robust. It is necessary to guard against the attacks of insects; those most to be dreaded are the wood-lice and black spiders.

The plants from this sowing will commence flowering in the beginning of August, and will continue till September; so that in order to prolong the flowering, it will be necessary to make several successive sowings at intervals of ten or twelve days; but those sown in the end of March produce the most vigorous plants and the finest flowers.

Sown in pots or earthenware pans.—These, when the seeds are sown, are covered with a pane of glass, whitened on the upper side with chalk and water. This glass has the effect of breaking the rays of the sun, and of preserving the seeds from mice and other animals, or insects, and it prevents the soil from becoming too dry. The pots are then placed in a house with a temperature between 60° and 70°, and as near the glass as possible, or, better, in a warm frame. A little air is admitted when the plants come up by tilting the square of glass, from which the chalk should be previously washed off, in order that the young plants may have as much light as possibly can be given them. The pane of glass is removed when the young stems grow up to it.

Pricking out in the open air.—The plants from the sowing made under bell-glasses or in frames, between the 15th of March and the 1st of April, ought to be pricked out between the 20th of April and the 1st of May, at eight inches apart each way, in good light soil, covered with half an inch of fine leaf-mold. The plants should be carefully watered, but not at night, for the nights at this season of the year are frequently cold.

Pricking out under bell-glasses or frames.—The plants from sowings made in pots or pans being more susceptible of drawing up than those raised in the open ground, ought to be pricked out as young as possible, or as soon as they have developed one or two leaves. Fifteen to eighteen are pricked out under one hand-glass, and from eighty to a hundred under a frame four feet four inches square. The plants are slightly shaded from strong sun for a few days; air is gradually admitted, and when they have taken fresh hold, the glass is taken off at all times when the weather permits, for it is to be remarked that it is not employed for forcing the plants, but merely to protect them from atmospheric vicissitudes.

Final planting.—Between the 1st and 15th of June, taking advantage of cloudy weather, the

way apart, in soil well worked and manured with rotten dung. Basins are formed round each plant, and water is supplied several times a day when the weather is hot and dry. Twelve or fifteen days after planting the ground is hoed, or otherwise stirred between the plants; yellow leaves are picked off; the basins are again formed, and the surface of the soil is slightly mulched. Thus treated, the plants will become perfectly fresh-rooted by the first week in July. A stick is then put to each, without which it is impossible that the stems could support fifty or a hundred large well-expanded flowers, which will be produced on every plant.

As the proper arrangement of flowers in a garden is very important, and as a mixture of tall and dwarf varieties of different colors has a confused appearance, the seeds of the varieties of pyramidal China Asters should be gathered separately; and by marking, and sowing in regular order accordingly, the planting can be performed early, as above directed, without waiting too late to see the colors. To preserve the beauty of the flowers, it is advisable to shade them during the hot weather in August, the shading being removed at night; but in September and October the plants are fully exposed to the light during the day, and the thin canvas is then employed for protection from the cold at night.

ROSES FOR WINTER-BLOOMING.—A selection for this purpose should be made from the Tea and Bourbon families, on their own roots or budded very low. Presuming the plants brought from the nursery are in the small pots they are generally grown in for sale, they should at once be placed into those of a size larger, carefully and freely watered, during this and next month, cutting off all the flower-buds they may show before September. About the middle of the latter month shorten the strongest shoots, and thin out the slender ones, turn the plants out of the pots, depriving them of some of the soil, and repot in those of a good size larger, using a compost of rich loam, sand, and manure in about equal proportions; they also like a little leaf mold; put several pieces of broken crock in the bottom of the pot, then a portion of soil; place the plant so that its surface roots shall just be covered, and then filling with the soil; put them in a situation partially shaded—water sparingly, till they begin to grow—then expose them fully to the sun, and water freely every day. There they may remain till the middle or end of October, when they should be removed to a pit to prepare them for flowering. Previous to their removal, the pots should be washed, and the plants neatly tied up. Where charcoal can be had, it will be found of great utility in the pot-culture of Roses, broken to the size of nuts, and about one-fifth mixed with the soil; the roots delight to ramble through it, and the foliage becomes of a richer and darker green; the surface of the soil must have frequent stirrings. The plants must be carefully examined, and whenever infested by the green-fly, the latter should be destroyed by tobacco smoke. Roses in pots are wonderfully benefited by a watering of manure-water now and then. This water is very easily prepared. Let droppings from the stable or cow-house be put into a large tub or barrel, with water kept over them for a week or two, occasionally stirring it up; the water may then be poured or drawn off for use. Guano water also makes a good manure. A quarter of a pound of guano in three gallons of water, frequently stirred before using, will be found very nourishing; indeed, one pound to sixteen gallons will be strong enough to use by the inexperienced, for if used much stronger than I have stated it would injure plants in pots. In the open ground any of these liquids may be used stronger and rather more frequently.—*J. H., in Gardeners' Chronicle, London, July 18.*

THE *Lapageria rosea*, exhibited by W. J. MYERS, Esq., at Chiswick, on Saturday last, has been grown in the plant-stove, where for the last three years it has never failed to flower beautifully; and when fifteen or sixteen blooms are in perfection at one time (as we have had it) the effect is very striking. One planted out in the border of a Camellia-house has not grown any—in fact, it has grown small by degrees and “beautifully less.” Another planted in the border of the plant-stove last year has made a shoot twenty feet long, and is now in flower, and up the rafter. We find that it grows best in pure leaf-mold, with plenty of pieces of wood in the state of decay mixed with the soil, and the plant kept well up in the pot or border in which it is planted.—*J. Selkirk, in London Gardeners' Chronicle, July 18.*

CULTURE OF THE CHINESE PRIMROSE.—I generally sow my seeds about this time, or a little earlier, in shallow pans, in light sandy soil, without any manure. They are sown thinly and pressed down on the surface, so as just to be covered with the soil. After a gentle watering, the pans containing the seed are removed to a hot-bed, where they remain until the young plants are about an inch in height. At this stage, they are pricked out into the same sort of pans, an inch apart, adding this time one-third leaf-mold to the soil. The plants are put into the hot-bed again until they have attained the height of two inches, when they are taken out of the pans, and shifted into 5-inch pots that have been well drained. The compost for this and their final shift consists of equal quantities of cow-dung two years old, leaf-mold, peat earth, and sandy soil. After potting, the plants are removed into a cold frame, with an eastern aspect. The lights are kept close for a few days, and the plants are shaded from the mid-day sun until they commence growing. Air is then admitted, gradually at first, but as soon as I perceive the plants to be fairly in a pushing state, I ventilate freely. The sashes are, however, always put on when it rains, for nothing is so injurious to Primulas as water overhead, at any stage of their growth. As they begin to fill their pots with roots, I give them liquid manure once a week, made from pigeon's dung. I permit the first flower stem to rise, but only for the purpose of judging of the merits of the flower. As soon as that is decided, the good flowers are picked out, and when the pots are filled with roots the plants are finally shifted into 8 or 12-inch pots, and treated in precisely the same way as at the former shifting, and with the same situation and aspect. They remain in the cold frame until the middle of October. After that they are brought into their winter quarters to flower in the green-house. As soon as the plants have stopped growing, I withhold the dung-water, as a continuance of it would be likely to destroy them in the winter months.—*J. H., in London Gardeners' Chronicle, August 6.*

STANDARD ROSE TREES.—I offer to the lovers of standard Roses a little plan of my own; it has succeeded admirably. An artificial prop to standard Roses is unsightly, and is both exposed to decay in the run of time, and to disasters from the raging of the wintry blast. In order to do without this prop, plant three standard Roses, (the longer the stem, the better,) in an equilateral triangle. If on a slope, one leg must be longer than the other two. They may be from eight to fourteen inches apart. Bring the stems together at the top, and bore a hole through each of them, a little below where they have been budded; then through these holes thread a copper wire, such as is used for soda-water bottles, and bring the heads of the three plants quite close together, making the ends of the wire fast. This is all. You have here a group so firm and strong, that it can never break down, or ever require an artificial support. I made four groups last autumn. They are now in fine blow, and are much admired.—*Charles Waterton, in London Gardeners' Chronicle.*

THE NIMROD STRAWBERRY.—We have received samples of this from Mr. SANDERS, the intelligent gardener at Tedworth, with a request that we would state our opinion of it. So far as we can judge of it, after having been packed in a post-office bag for several hours, we should say it is superior to the *British Queen*; it is large, oblong, or rather conical, with the same color as that variety, but sweeter and richer. It is said by Mr. SANDERS to be an excellent bearer, and to force well; in addition to which it is reported to be much hardier than the *British Queen*, nearly all of which perished last winter round Tedworth, while this *Nimrod* suffered in no degree whatever.—*London Gardeners' Chronicle.*

THE LATE PROFESSOR ADRIEN DE JURSIEU.—Advices from Paris mention the decease of this distinguished botanist, upon whom the mantle of his great ancestors may be said to have fallen. Among the most conscientious and exact of systematical writers he also ranked high as a physiologist, as his well known elementary work has shown the world. For many years his health had been delicate, and of late had been deplorable. By his decease a vacancy occurs in the President's chair of the French Institute, in that of Professor of Rural Botany in the *Jardin des Plantes* (which, it is said, will not be filled up), and among the twenty foreign members of the Horticultural Society of London.—*J. L., in London Gardeners' Chronicle.*

HORTICULTURAL EXHIBITION AT CHISWICK, JULY 9.—We take the following extracts from the *Gardeners' Chronicle*:

Roses (cut) were shown in abundance, and maintaining as they did their freshness and fragrance well, they formed, as they generally do in July, a highly attractive feature of the show. Collections of fifty varieties were produced by Messrs. LANK, PAUL, FRANCOIS, CLARKE, and WILKINSON, and of twenty-five varieties by Messrs. TERRY, EVANS, ROWLAND, BUSBY, SAGE, MUNRO, BUCKTROUT, and GAIL. Among the different exhibitions we remarked excellent blooms of *Provins* or *Cabbage*: *Madame Henrietta*, large rosy pink; *Cristata*, bright rose. *Gallica*: *Bizarre Marbré*, mottled crimson; *Boule de Nanteuil*, reddish crimson; *Kean*, brilliant carmine; *grandissima*, bright crimson; *Latitie*, mottled crimson; *Shakespeare*, shaded deep crimson; *Triomphe de Jausse*, bright crimson. *Alba*: *Duc de Luxembourg*, white, with a blush center. *Hybrid China*: *Brennus*, bright carmine; *General Jacquimot*, large shaded lake; *Lady Stuart*, blush. *Hybrid Bourbon*: *Chénédolé*, dark crimson; *Comtesse Molé*, pink; *Comtesse de Lacepède*, blush; *Coupe de Hébé*, pink; *Great Western*, red; *Paul Perras*, pink; *Paul Ricaut*, deep carmine. *Damask*: *Isméne*, white; *Madame Zoutman*, creamy white. *Hybrid Perpetual*: *Amandine*, pink; *Baronne Halles*, fine crimson; *Baronne Prevost*, very large pink; *Dr. Marx*, rosy carmine; *Caroline de Sausal*, beautiful blush; *Clementine Seringe*, large shaded blush; *Cornet*, bright pink; *Duchess of Sutherland*, beautiful blush; *Earl Talbot*, deep rosy pink; *Géant des Batailles*; *General Negrier*, blush; *Jacques Laffite*, pale carmine; *Comte de Paris*, pale crimson; *Madame Trudeauux*, beautiful carmine; *Miss Pepin*, large delicate pink; *Queen*, rose; *Robin Hood*, rosy pink; *Soleil d'Austerlitz*, carmine; *William Jesse*, crimson, tinged with lilac; *Comte Robrinsky*, bright crimson. *Bourbon*: *Souvenir de la Malmaison*, creamy white, with a blush center; *Acidalie*, French white; *Bouquet de Flora*, rose; *Souchet*, deep crimson; *Dupetit Thouars*, ditto; *Leveson Gower*, carmine; *Paul Joseph*, purplish crimson. *Tea*: *Devoniensis*, creamy white; *Niphotos*, pale lemon; *Bougère*, rose; *Elise Sauvage*, yellow; *Safranot*, fawn. *Noisette*: *Lamarque*, pale lemon; *Aimée Vibert*; and *Solfaterre*, sulphur.

Messrs. LANK showed boxfuls of *Géant des Batailles* and *Paul Ricaut*, both in beautiful condition, more especially the latter, which is one of the best Roses we have; Messrs. PAUL had a seedling Moss which is distinct and promises to be an acquisition.

NEW PLANTS.—The most important of these was the beautiful *Ceratostema longiflorum*, from Messrs. VEITCH. The same nurserymen also sent *Philecia buxifolia* and a pretty hybrid *Veronica* called *variegata*. It was in the way of *V. Andersoni*, but the flower-spikes were tipped with pink instead of violet. Messrs. LEE sent *Begonia Prestonensis*; Mr. SELKIRK, of Porters, near Barnet, furnished a large specimen of the handsome *Lapageria rosea*, producing some dozen flowers; and Messrs. HENDERSON sent *Gaylussacia pulchra*, a promising plant from their nursery in Wellington Road, along with a variegated *Ananassa*, *Hoya Sieboldi*, and one or two other plants; Mr. TAYLOR showed the common *Arum Dracunculoides* in this class, and Mr. GREEN an *Ixora*, called *neriifolia*.

VARNISH FOR IRON-WORK.—Locksmiths and others, says the *Home Companion*, working at the forge are accustomed to blacken the articles intended for railroads by making them red-hot, and burning on them some linseed oil. This plan, which is practised to improve the appearance of the articles and to protect them from rusting, is not economical nor always successful: it fails when the combustion of the oil has been too great. By the following process a varnish is made without the above disadvantages, which gives to the articles a better appearance: Dissolve, in about two pounds of tar-oil, something more than half a pound of asphaltum, and a like quantity of pounded resin; the mixing is performed hot in an iron kettle, care being taken to prevent any contact with the flame. When cold the varnish is poured into a vessel and kept for use. These varnishes are for out-door wood and iron-work, not for japanning, leather, or cloth. Oil varnishes are used for patent leather, and copal for japanning metal.—*Builder*, in *London Gardeners' Chronicle*.

Editor's Table.

OCTOBER is one of the most active months in the year with the gardener, orchardist, and nurseryman. A multitude of labors demand simultaneous attention, and it requires the most untiring energy and industry on the part of every one who has any considerable charge on his hands to see that every thing be done at the proper time and in the proper manner. Fortunately, in this country, our October weather is delightful—dry, cool, and bright, generally, and therefore eminently favorable for the rapid and proper execution of all out-door work.

Transplanting of all hardy trees, shrubs, and plants usually begins here in the north about the first of October; and, as we go further south, it must be deferred later. We are greatly in favor of early planting, when it is practicable; it is by no means necessary to wait until the leaves have fallen. If growth has fairly ceased, and the wood has become firm, trees may be removed; the leaves must be taken off to prevent shriveling, and the roots must be carefully guarded against exposure until they be again placed in the ground. Autumn planted trees should by all means be secured against the winds, either by staking or banking up; and they should be well mulched besides. From this time until the final freezing up of the ground, the laying out and improvement of new places should be carried forward vigorously, as the weather and the condition of the ground are both more favorable than during summer or spring.

Neglected orchards should now be renovated by manuring and plowing, or spading about the roots. This should never be deferred till spring, because during the winter and spring the sod decays, and the manure dissolves, and abundant food is thus prepared for the trees next season.

The *gathering and storing of fruit* must be carefully attended to by all who place a proper estimate on the products of their orchards and fruit gardens. We have given elsewhere an article that furnishes many useful hints on this subject; it is worthy of an attentive perusal.

Kitchen and garden crops for winter and spring use require nice management to keep them in a proper condition. Such as are taken up and placed in the root-cellar should be handled when dry, and the cellar should be clean and sweet, and perfectly free from moisture both above and below; it should also be kept cool as possible, but not admit frost.

Such of the bedding-plants as *Salvias*, *Scarlet Geraniums*, *Fuchsias*, *Heliotropes*, *Cupheas*, *Bouvardias*, *Plumbagos*, *Abutilons*, &c., as it is desired to save for another season, should be carefully lifted early, and either potted or planted closely in boxes, and placed in a cool green-house, or in some place where they will have light and not freeze. A corner of a dry cellar beside a window will answer in case of necessity, but decaying leaves must be frequently removed. Many of these plants, and some others we have not mentioned, such the *Habrothamas*, if taken up carefully in good season, may add materially to the beauty of the green-house through November. Many of the late flowering annuals are useful, too, in this way. *Chrysanthemums* from now till Christmas will be among the chief ornaments of the green-house; they require plenty of light—all that can be given them; plenty of water, and an occasional dose of liquid manure.

THE FRUIT CROP IN WESTERN NEW YORK.—Apples, generally, are neither so abundant nor so fine as usual; a single orchard, or a few trees, here and there, are exceptions. The crop of pears is much below that of last year. Peaches have surprised people by their abundance and fine quality. We have been through New Jersey, Delaware, Maryland, &c., in the midst of the peach season, and saw no finer fruit than has been sold here in large quantities since the 10th of September. The worst feature in our peach business is, that it opens late. *Early York* did not appear in market till the first week in September, and now (Sept. 18) *Crawford's Early*, *Large Early York*, and others of the same season, are coming in freely. *Morris' Whites* and *Old Mixons* will not be ripe for a week or ten days, and *Crawford's Late Melocoton* and *Red Cheek Melocoton*, will not be ripe short of two weeks. It is interesting to observe that some orchards in which there was a full crop last year, are entirely fruitless this, and others that bore none last, are laden this season. Within a few miles we see some orchards bearing well, and others a total failure. Our heaviest crops are in warm, sheltered situations, within a short distance of the shores of Lake Ontario.

A HANDSOME PEACH ORCHARD.—JAMES M. WHITNEY, Esq., of Rochester, has a peach orchard of upward of one thousand trees about half way between this city and Lake Ontario, which we visited on the 18th September. The trees generally are in a vigorous and healthy condition, and the crop very heavy. This orchard occupies a warm, sheltered situation, and seems to have escaped the severe weather last spring, so ruinous to the peach generally in this section. Among those particularly fine we noted *Large Early York*, *Crawford's Early Melocoton*, *Yellow Alberge*, *Jacques' Rare Ripe*, *Morris' White*, *Old Mixon Free*, and *Crawford's Late Melocoton*. *Early Tillotson* is an utter failure—thirty or forty trees stand without a single fruit and nearly dead, in the midst of luxuriant and heavily laden trees of other varieties. The *Red Cheek Melocoton* does not succeed well here. Mr. WHITNEY has also a fine young peach orchard of some seven hundred trees just beginning to bear.

A CHINESE PEACH.—In the June number of the *Horticulturist* we published a note from HENRY LYONS, Esq., of Columbia, S. C., describing a Chinese peach. We have now to acknowledge his kindness in sending a pretty colored drawing of the same variety, representing it as medium in size, of a greenish straw color, marbled with red on one side near the base. We believe it has not yet fruited in the north. Its beauty and excellence recommend it to fruit growers in the south, where it appears to be perfectly at home. Mr. LYONS accompanies the drawing with the following note:

I inclose you a drawing of the Chinese peach, which is a very correct copy, but smaller than they usually are, which arose no doubt from the circumstance of our having no rain from the 10th of March to the 10th of July; it did not ripen until the 24th. I am more confirmed every year in the excellence of the variety. I omitted in my description stating the bloom was remarkably large, as much so as the *White Nutmeg*. I will with pleasure, if you desire it, forward you some buds.

I was in hopes I would have been able to forward you some experience on the *Crescent City* strawberry, but the drouth literally burnt them up, with the exception of a few plants which I saved by continual watering. I very much fear, from what little experience I have had, they will never do elsewhere what they do in New Orleans, we lacking two indispensables, viz: soil and climate. HENRY LYONS.—Columbia, August 8, 1853.

NOTES ON ORCHARDS, FRUITS, &c. &c.—The early days of September, 1853, have never been exceeded by a purer atmosphere, or a more brilliant and cheering sun. From the 9th to the 12th it was a luxury to be out of doors, and during that period we rambled out of the city to look at the fruits, as they were ripe and ripening. We went down West North street a distance of two miles, and were delighted to find the door-yards of the people filled with shrubs and trees.

We struck the Ridge, which runs east from Carthage, where the most natural soil for the Peach tree prevails. Being a light loam, it not only produces peaches, but, with a mixture of compost, and other enriching, good crops of apples, pears, plums, and cherries, may be had. On the Ridge, almost every tenant had well-laden trees of peaches, of the *Royal Kensington*, *Sweet Water*, *Early Crawford*, *Yellow Melocoton*, and *Alberge*; certainly a more beautiful sight could not be witnessed than the coloring of the fruit. The season was never better in this region, as our amply-supplied market has shown at fair prices.

We proceeded to the grounds so long occupied by Mr. H. N. LANGWORTHY, comprising some forty-two acres of land, which has been recently added to the "River Bank Nursery" of Messrs. CHERRY & Co. Mr. LANGWORTHY's skill has been shown in the symmetry of his trees, as well as their healthfulness and fruitfulness. His orchard of Apple trees, comprising the earlier as well as the fall and winter kinds, were certainly as fine as we ever saw; and for standards, they will serve an excellent purpose of the new purchasers.

The *Northern Spy*, *Norton's Melon*, *Esopus Spitzenburgh*, *Pomme Grise*, *Winter Calvert*, with *Holland Pippin*, *Tulman* and *Green Sweeting*, and *St. Lawrence* trees, were well filled, looking finely. The first two were particularly well grown, and the coloring of the *Melon* was really attractive.

The pears grown on their own stocks, including the *White Doyenné*, or *Virgalieu*, *Onondaga*, or *Swan's Orange*, and *Duchesse d'Angoulême*, were of extraordinary size, and the trees were bending with the weight of fruit.

The grapes, including the *Clinton*, which was nearly colored, and soon to be ripe, with the *Catawba* and *Isabella*, were finely matured in size, and if the season only extends itself without frosts into October, a good crop will be had.

I trust the new occupants will see to it that the trees be kept in their present condition, for truly Mr. LANGWORTHY has left a model orchard and garden grounds. J. H. WATTS.

The peach referred to by Mr. WATTS as "*Sweet Water*," is, as he knows, the *Large Early York*; and what he calls "*Early Crawford*," is *Crawford's Early Melocoton*. We will thank correspondents who write about fruits, to write out the names fully and accurately, when they know them, in order that the reader may know precisely what they are writing about.

Will you allow me to tell you my own experience in strawberry culture in this place! Of all American strawberries, I find *Burr's New Pine* the highest flavored, and a good bearer; *Black Prince*, great bearer, but sour and poor quality; *Hovey's Seedling*, good bearer in rather moist ground, and poor bearer in very dry; *Ross' Phoenix*, very good bearer. But as our climate is not so hot as in New York for a long time, we find the English strawberries do the best. The *British Queen*, *Keene's Seedling*, and *Alice Maude*, all produce very large crops of finest fruit. Another thing: as the snow falls here as soon as freezing weather begins, and remains until late in April, the plants require but little covering; and when it is removed in the spring, the plants are very green, and the new shoots are pushing out.

Covered as the ground is with snow, the finest roses can be left out all winter, by fastening them to the ground, and covering them with branches of evergreen trees; and by allowing these branches to remain till warm weather, the roses commence growing under the covering, and soon after the removal of the covering put out buds and flowers, and thrive finely. One of my neigh-

bors had a rose in his house which he valued very highly; but as it seemed drooping, he took it out in the coldest weather (here), and laid the rose in the snow on its side in the pot, and covered all deep in the snow. When spring came and warm weather, he uncovered his rose and found it quite, recovered, and doing very finely.

Allow me to speak of one thing further. Lately we have seen an account from Russia, that by drying the potato before planting, it was much earlier, stronger, and free from disease. I mentioned this to Mr. WILLIAM FARIS, a very successful gardener, who lives at Sorel, a town about fifty miles north-east of Montreal, and he told me that he has never had any diseased potatoes in his grounds, while his neighbors, who plant their potatoes side by side his lands, only separated by the fence, are every year losing one-half and more by disease; and he told me his plan: early in March, and earlier, he begins and cuts off a small piece (a trifle deeper than is necessary in cooking) from his potatoes, as the family require them for daily use, and he keeps a box near the kitchen stove, where it remains *very dry and warm*; into this box the small pieces of the potato are placed, as the family require potatoes from time to time, until May. He then plants these *very dry pieces*, or cuttings, of potatoes, and they grow very finely. He has potatoes three weeks earlier than his neighbors, and never had a rotten one, though he sometimes sees a spot on one. Mr. FARIS has still some of his old potatoes, and he says they are as good as they were last May; and he has promised me a few, which I hope to send to your State Fair. He did not think of keeping any of his old potatoes, as he had plenty of new ones, until very lately, when he thought of keeping some till fall, and will show them this month at our Provincial Exhibition. Let me say Mr. FARIS is a respectable man, and reliance can be placed on his statements. WILLIAM BUNSTER. — *Montreal, September 8, 1853.*

VINE BORDERS AGAIN — CURCULIO REMEDY. — Mr. MESTON has broken his lance upon me, but I believe I am not yet unhorsed, though my steed was only a dead one. I made no attempt to prove that good grapes could not be grown without animal manure, for I know perfectly well that they can; neither will I now enter into any argument on that subject, which has been ably discussed elsewhere. The facts I stated certainly proved that vine roots are fond of decomposed animal manure, and, so far as I can perceive, Mr. M. has brought forward nothing to disprove this assertion. As for the theory of the growth of roots, I am quite willing to rest the case between his statement and mine for the decision of those who are interested.

I said nothing of the quality of my fruit, except that I had no cause to find fault with it, because I do not consider such testimony of much value; for when one speaks of the results of his own labors, he is apt to produce upon the minds of others only a feeling that they are not listening to a disinterested witness. Moreover, I do not consider the quality of the fruit in any single instance to be of much value as evidence, since it may so easily be affected by other causes. As Mr. M. calls for information on this point, however, and is willing to accept it as a decisive test, I will refer him to the records of the Pennsylvania Horticultural Society, which will show him that my *Black Hamburg* grapes have received the first premium at every annual exhibition for the last five years; and further, if he will inquire of any of the horticulturists about Philadelphia, he may learn that this character is not confined to the few bunches sent to the exhibition.

As for Mr. M.'s account of his own vines, every reader of horticultural journals must have observed how frequently such stories have been brought forward of the extraordinary growth and productiveness of young vines, which is always attributed to some peculiar construction of the border; and every experienced grape grower knows that such a result proves nothing, except that the luxuriant verdure of the vines is quite equalled by that of the cultivator. Mr. M.'s case, however, presents some remarkably rich features in the evident satisfaction with which he speaks of the quantity and quality of his fruit, in the sentence next succeeding the one in which he tells us it was not yet ripe. The very equivocal compliment of the gentleman from Louisville too, seems to have gratified Mr. M. very much; and perhaps he will be pleased to learn that I can compliment

him in even stronger terms of the same kind, for I assure him that I never had so many grapes in a house one hundred feet long till the vines were five years old, as he had this year on his vines, for I always pinched off every bunch before it even had time to open its blossoms.

I thank Mr. M. very sincerely for his entertaining story, and hope he will continue to report the progress of his vines from year to year.

I am happy to add my testimony in corroboration of Mr. LUDLOW's, as to the efficiency of lime and sulphur as a preventive of the curculio. I have been many years experimenting to find some means *which could be profitably applied* to prevent the ravages of this insect, but have never ripened a dozen plums in an orchard of twenty trees, though they have been covered with fruit every spring. Last spring, however, at the suggestion of Mr. STOKES, of West Philadelphia, I applied the lime and sulphur, according to Mr. LUDLOW's directions, and though some of the fruit was afterwards stung, no ill effect followed; and though I thinned out the fruit a great deal, I was finally forced to prop my trees, and have been regaled for some time past with such fruit as we have never before been able to ripen here. The remedy is so easy that it may be applied extensively, at trifling expense. H. W. T. CLEVELAND.

"I long have thought," Mr. Editor,
 "A something to have sent you,
 Tho' it should serve nae other end,
 Than just a kind memento."

I know but little, sir, of the business in which you are engaged, viz: Horticulture and its kindred branches; yet I know enough to wish to know more, and to feel interest in the success of the enterprise. Then, sir, set me down as a well-wisher, and one who, if he had the capacity and leisure, would like to be a contributor. I am a cultivator of fruits, on a small scale—a little enthusiastic (*cracked*, if you please,) on the subject; and *wherever* I find one of kindred feelings, why, sir, I "lo'e him like a vera brither"—"I know no North, no South, no East, no West"—"his people shall be my people, and his God my God."

And here it may be appropriate to mention my admiration for your predecessor, A. J. DOWNING. If men are to be estimated by the good they do while living, long should A. J. DOWNING be remembered with gratitude by his countrymen. He has done more to combine "the useful and the beautiful," than any man of the present age. He has done more to create and model a proper taste for the adornment and decoration of home, to make home, "sweet home," lovely, and thus make men true patriots, than all the politicians that have lived since "ABRAHAM BEGAT ISAAC." Why onewith such enlarged and enlightened capacity to enjoy this beautiful world, and the business and pleasure of whose life was to make it still more beautiful, should have been so suddenly and so rudely removed from it, is a mystery alone to be solved in that bright and blissful paradise, where he has gone, and whither we may follow, if we be but "chaste," but "innocent like" him, "as firm in friendship, and as fond in love." But, sir, others who knew him better, and therefore loved him more, have eulogized him in better taste, and more appropriate style, than I can. But my heart was in it, and I could not say less; to say more would be not only useless, but imprudent in me.

Mr. Editor, I have told you that I was a cultivator of fruits in a small way, and having a leisure time at present, my purpose in commencing this communication was simply to comply with a request made by you sometime since, that your readers would note the season of ripening of the different fruits in their respective localities. I had several kinds ripen the present season, but noted only some plums and peaches. And first, as to plums. In this section (Granville county, in which I reside, is one of the northern counties of North Carolina, between the 36th and 37th degrees of north latitude,) *Bolmer's Washington* was the first to ripen—July 20th. The *Red Magnum Bonum*, the 25th of July; and if I have the true *Red Magnum Bonum*, it is a

dark-red or purple, and pronounced in flavor superior to the *Washington* by all who tasted. *Imperial Gage* ripe the 25th of July; superior in flavor to either of the former. *Bingham*, about the 1st of August; very good, large plum. *German Prune*, 6th of August; and although very rainy, hung on the tree until nearly dry, and I believe of an ordinary dry season would make good prunes on the tree in this climate. I gathered a few from the tree partially dry, and cured them completely in the sun in a few days.

Peaches.—The first to ripen was the "wee bit" *Nutmeg*, which came the 22d day of June as the harbinger of good things which kind Nature had in store for us; and next the *Early Anne*—good, very good, because just at that time (the 10th of July) there was nothing better. But just eight days after, July the 18th, the *Early Tillotson* was here, fully sustaining its high reputation as an early peach, and two days after, July the 20th, the *Early York* was its competitor for the honor of being called the best; and before I could decide, the 25th of July brought *Cole's Early Red*, "with its blushing honors thick upon it," and it's really hard for that mouth which tasted all to say which was best; but if all were not best, "the last was not least." Then from the 25th to the last of July we had the *Bellegarde*, the *Gross Mignonne*, the *Royal George*, *George the Fourth*, *Crawford's Early*, and the *Monterey*. The four first were large and beautiful to behold, but watery and insipid to the last degree in flavor, hardly equal to a Dutch turnip; and though every tree was loaded to the ground, the curse and the fate of the fig tree should be theirs, if I did not happen to know better. Now, in 1851, all the three first bore fruit the first time, and better and more delicious fruit I never tasted during their season. Then why was it so this year! Why, for six or eight weeks previous to July the 12th, the season had been "as dry as a chip"—neither rain nor dew enough to wet the gossamer as it floated lazily in the hot atmosphere; but from the 12th to the time of ripening, showers innumerable came pattering down both thick and fast—rain, rain, rain—until the poor peaches were drenched to the skin, and through the skin, and being fed on water alone, and having no sunshine to assist in elaborating their own rich saccharine juices, they "were compelled to submit to the force of circumstances" and turn turnip. Doubtless in a more auspicious season they will be, what they long have been, "very hard to beat." But the two latter were very good—*Crawford's Early*, perhaps, as good as it ever was. And here I will remark that there was not a single yellow peach in my collection that seemed at all affected by the wet season. The *Yellow Alberge* ripened next, the first week in August, and a more luscious peach I never tasted—full to overflowing with the richest saccharine juice, tender, sweet, and melting; it was exquisitely delicious, and had this been the fruit which mother Eve "gave also unto her husband," I should feel strongly inclined to excuse her upon the ground that having eaten of it herself, she wanted every body else to have some, and rather than blame, would commend her generosity and benevolence.

Well, sir, having "run away with matters" in praising this peach, while I know the books have said so little for it, it would be well to mention that I may be mistaken as to identity; but I obtained it from the nursery of Messrs. J. & G. LINDLEY for the *Yellow Alberge*, and it answers to the description in ELLWANGER & BARRY's catalogue. Be it what it may, it deserves all I have said of it, and more, if I could say it. It is the first year the trees have fruited with me, and "if it holds out as it has begun," I will travel fifty miles on foot to see and taste the peach that beats it.

From the 12th to the 20th of August the *Old Mixon* ripened, and the first peaches that ripened were very, very insipid indeed—owing, doubtless, to the wet season; but those that ripened from the 16th to the 20th were fully "worthy of its ancient renown." Then, too, on the 20th of August we have the *Late Admirable*, a very nice peach, and the same date we have *Crawford's Late*, "in fair round belly," "cutting a swell over every thing" in peachdom. I measured one this morning nine and a half inches in circumference. The *Paris de Pomponne* is ripe here on the 20th, but neither so large or so good as the *Crawford's Late*. The *Blood Cling*, the *Catherine Cling*, and the *Heath Cling* have yet to ripen with us, and judging from what I have seen, fruits ripen here just one month sooner than in the neighborhood of Rochester, N. Y.

Mr. Editor, I am unwilling to close this communication, already "unprofitably" long, without saying something of a grape lately found in this vicinity; and if you have an atom of patience left, I promise to be brief. Bunches—medium, loose, composed of from eight to fifteen berries, round, very large, many of which will measure two and a half inches in circumference. Skin—thick, but not so thick as *Scuppernon*, pale red, blackish-red when fully ripe, covered with thick bloom. Flesh—pulpy, juicy, sweet, slightly musky, scent quite musky. It was found growing in this neighborhood in a poor washed place, that had not been in cultivation for many years, climbing over some stunted bushes, and probably if cultivated in a good soil would grow much larger. If any should suppose that I have been describing the grape that is familiarly known in this section as the *Muscadine*, I can inform them that although resembling that grape somewhat in shape and flavor, it is not only distinct from it, but a different species of grape. What we call the *Muscadine* is what DOWNING, THOMAS, and others, call the *Black Scuppernon*, with smooth bark on the old wood, and leaves smooth on upper and under surfaces; while the grape which I have attempted to describe has rough, shaggy bark on the old vine, with larger leaves, differently shaped, upper surface dark green, under surface very downy or furred, of a beautiful color.

Well, some may ask, Suppose all this be so, what does it all amount to? Why, just to this, and no more: in size it is one of the most splendid of grapes; it may prove a good wine grape—I can see no reason why it should not—it is well flavored, productive, and does not rot, and is of that species of vine which is easily propagated by cuttings. Ripe the middle of August. RUSTOUS.
—Tar River, Granville county, N. C.

I HAVE carefully noted the instructions given from time to time in your journal as to the importance of mulching trees; and as I have a large orchard of young trees, I have tried several experiments with tan, chips, straw, spent logwood, &c. The result has satisfied me that nothing is more important in the cultivation of young trees than the protection of the roots by mulching. During the severe drouth of the past summer, all my young trees (with a few exceptions to be named) have thrived beyond my most sanguine expectations without being watered, which I attribute wholly to the fact that the roots were protected by a substantial mulching of turnings, chips, tan, &c. I had some ten or fifteen trees deeply mulched with spent logwood—say six to eight inches pressed down to three inches, in a circle of six feet diameter around young trees, which were the most valuable on my place. These trees I find have done nothing this year—some of them have not grown an inch, and I am persuaded that over mulching, like over doctoring, is deadly, and as much to be deprecated and guarded against as intemperance in any other form. If you accord with me, will you please inform your readers in your next number that moderate mulching of trees is good and beneficial, and will save a large proportion of new settings in the driest season, but that four inches pressed down round a young tree will exclude the sun and air, on which the tree is as dependent as for water and nutriment, and will as surely kill the tree as fourth proof alcohol without water will the man.

LUAL

I SEND you some caterpillars, different to any thing I have ever seen until last year. They are very bad upon resinous plants—the Cedar and Arbor Vitæ their favorites. But, for an experiment, I took about a dozen from a Cedar and laid them on the walk, and found they took possession of the first plants they came to, which happened to be *Chrysanthemums*. They travel with great facility, and take their house with them. Last year I saw but few of them, but this year they have come by hundreds and thousands. You will find a cocoon of last year among them. All that I have cut open are like the one I send you. My impression is that the caterpillars leave it when very small, and that there are many in one of these cocoons. It is the most destructive thing I have ever seen, and if it gets ahead is capable of destroying all the Pines and Cedars it comes to. I find they can be got rid of by picking them off and burning them. ROBT. MASON.

An account of this insect will be found on another page. We are thankful for all information of this kind.

Notices of Books, Pamphlets, &c.

HINTS ON PLANTING ORNAMENTAL TREES, with particular reference to Conifers. By STANDISH & NOBLE. Bagshot, England.

For some years there has been an unusual degree of interest taken in evergreen coniferous trees. The amount of money expended on this class of trees is, we believe, without a parallel in the history of tree planting in Great Britain, or in the world. The prices given cheerfully for single specimens of rare sorts, has only been equalled by the memorable tulip mania. This spirit remains yet in full vigor, and bids fair to continue for a long time to come. Any one who has visited Britain recently, and looked into the parks and pleasure grounds, must have been struck with the predominance of evergreens, and especially of the newly introduced species, such as the Deodar Cedar, *Auracaria imbricata*, &c. Messrs. STANDISH & NOBLE, who have issued the little manual we notice, are among the most noted and intelligent growers of these trees, and being frequently consulted respecting the character of trees and mode of planting and management, have been induced to put some practical instructions in this form. We wish we had such a book adapted to this country, and we must have it soon. We transfer the following remarks to our pages, because they present considerations as well worthy the attention of the planter here as in England.

"PLANTING IN EXPOSED SITUATIONS.—The position of the different groups and detached specimens having been decided on, the first consideration should refer to drainage. A drain should lead from or intersect each position intended for a single specimen, and a number in proportion to the size be in connection with the spaces allotted for each group. It will not be always necessary to afford separate drains to each. A judicious application of cross-draining, made with reference to the natural declivities of the ground, will equally accomplish the desired purpose.

"The point next demanding attention will be trenching. The situations for single trees should be trenched to the extent of at least ten feet in diameter, and eighteen or twenty inches deep, and those for the groups of a like depth, and considerably wider every way than will be required for the reception of the permanent trees. After the necessary draining and trenching, and if a season's delay is of no moment, it will be found an excellent system to take a root crop before planting. The manure and consequent cultivation will bring the soil into an excellent condition for the reception of plants; and although a season is *apparently* lost, it will not prove so in reality. The increased rapidity of growth in soil so well prepared will more than compensate the seeming loss of time.

"There will, of course, occur many situations where this application of manure, as far as the trees intended to be planted are concerned, will be unnecessary, while in others of a very inferior character, both a liberal manuring and cultivation will be requisite to bring the soil into a condition for their reception, with fair prospects of success. The amount of manure and subsequent cultivation will, of course, be given in proportion as circumstances may seem to demand them.

"But there is an unhappy propensity prevalent to consider a tree as destitute of the ordinary wants of plants in general, and to believe that if it is provided with sufficient soil to cover its roots, no matter what the quality may be, it can not possibly fail to thrive; but, on the contrary, care and attention are as imperative in preparing the soil for trees, and will be followed with equally satisfactory results, as in the treatment of any other of our cultivated plants.

"An important auxiliary to success in planting, in the kind of situation we are at present treating on, is shelter. From its absence alone may be attributed many failures. The conditions which plants enjoy while in the sheltered nursery-beds are of so opposite a character to what they experience when removed to open situations, exposed to drying winds and scorching suns, and wholly destitute of shelter, that frequent failures, where no precautionary measures are taken, will not upon reflection cause much surprise.

"The preliminaries of draining and trenching having been properly attended to, and the soil in a condition to receive the plants, and the exact spot for each *permanent* tree determined on, mix in the site for each, if the state of the soil seems to demand it, a portion of decaying vegetable matter, as rotten leaves, for the immediate reception of the plants.

"Then, with the exception of such prepared sites, plant the whole of the trenched ground somewhat thickly with common evergreen trees and shrubs, for the purpose of affording shelter to the ornamental and permanent specimens subsequently to be placed there. If the situation is very much exposed, and the soil unfavorable, the trees planted for shelter should be allowed to make one or two seasons' growth before placing the permanent specimens. And, in the meantime, they too should be prepared to meet the difficulties of their intended new situations, by a course of treatment, for which the following instructions are offered: Procure some pieces of elm plank about $1\frac{1}{2}$ inch square and nine inches long, also a quantity of larch stakes about $1\frac{1}{2}$ inch in diameter, and of the same length with the pieces of elm, and split them longitudinally. Then take four pieces of the elm, one for each corner, and nail to them the pieces of larch, leaving spaces about three-quarters of an inch between each two, and on one side, or rather the top, entirely open. You have now the skeleton of a box, or, perhaps, it might be properly called a crate, for the reception of a plant, and the spaces between the bars are to allow free egress to the roots. Prepare as many crates as you intend removing plants to exposed situations. Have ready some good turfy loam, with which is mixed a little leaf-mold, fill the crates with the compost, and place a plant in each, as in the ordinary mode of potting. At first they should be placed in sheltered situations, but removal should take place twice a-year, in spring and autumn; and at each removal a less sheltered situation should be chosen, till they at last occupy a tolerably exposed locality. They should always be kept planted as deep as the top of the crate. At the close of the second season they will be in a suitable condition to be planted in their permanent places. They need not be removed from their crates, as they will be quite rotten before the roots are of sufficient size to be obstructed by them. By adopting such a course, success will be obtained where every other means have failed.

"It is also an excellent system to employ crates for preparing trees intended for removal, even to favorable situations. By using them larger and stronger, large and valuable specimens may be removed without risk of failure; and the system is especially to be recommended for trees which are known to transplant badly.

"In determining the distances which the permanent plants should be placed from each other, no rule can of course be given. As they are ultimately to form a picturesque arrangement, a design will, of course, have been previously decided on, in which their individual characters, as well as effect in combination, will be recognised. Due attention to this will prevent much subsequent vexation. Where several are to form a group, care must be taken that their ultimate appearance will not be that of a clump—the most unpicturesque and artificial of all arrangement, and is that best calculated to destroy the individual character of the trees composing it. They should be so placed that their branches shall mingle without destroying each other. A number of trees, though in a great measure detached from each other, will, when viewed from a little distance, seem to mingle together. And the arrangement may be such, that, from whatever position they are seen, a different form of outline shall be presented to the eye. Variety is thus produced; and while each tree preserves its individual character upon a close examination, the distant effect of the whole is that of a picturesque group. There is no necessity for crowding valuable trees together for the purpose of producing the appearance of a close wood, when seen from a distance.

"We have dwelt above on the advantages produced by a proper and timely application of shelter to trees in exposed places. But highly injurious results may arise from it, if its removal is not attended to when it in any way obstructs the progress of the trees it was intended to protect. It must never be forgotten, that such aids are only valuable in assisting the young trees

the sooner to become established, and that it must be wholly, but gradually, removed, as the latter become sufficiently robust to be independent of such assistance.

"In selecting plants for the permanent specimens, some care will be necessary, as much of the ultimate success will depend on the character of those employed. As a general rule, in proportion to the exposure of the situation, should the plants chosen be smaller, always however supposing them to be thoroughly healthy and robust, and such as have not previously been favored by soil or situation to an undue extent. Nothing is gained by employing large plants in exposed places. On the contrary, much time is often lost by the practice, even though they should be in the best possible condition. The larger and taller the plants, the more are they exposed to the untoward circumstances consequent on the situation." Plants of but a few feet in height, when placed in exposed situations, require the assistance of a stake, or the winds quickly damage them to a great extent; and the utmost care will not wholly preserve them from injury. And when others of eight or ten feet in height, as are sometimes employed, with the intention of producing immediate effect, are placed in similar situations, they frequently prove worse than useless. Two or three stakes are required to each, to enable them to withstand the influence of the gales; but no amount of available support will prevent them from being disturbed. The action, though slight at first, is every day augmented. They become loosened in the earth. Water—especially if the soil is tenacious—accumulates at the base of the stem and about the roots, chilling and retarding their vegetative powers. During this, rapid evaporation is draining the tissues of the plants, the loss of which their dormant powers can not recruit. Death, or an approximation, ensues. The foliage dies, and their appearance is calculated to disfigure rather than to beautify the places they occupy. Nor do matters often assume a more cheerful aspect with those which survive to the following season. Sometimes a feeble attempt at vegetation is perceived, but it too often proves an expiring effort. Many will linger on for years, and a few ultimately succeed. But not only would time and labor have both been economised, but the desired result have been more fully arrived at, by adopting the *apparently* slower means of employing young trees, and taking the necessary precaution to ensure their success.

"There are, of course, many situations, where large trees can not only be planted with perfect safety, but where it will be highly requisite to do so, and where no risk will attend their removal, if ordinary precautions are taken. It is in open and exposed situations that we are endeavoring to show the inexpediency of employing them.

For several years after planting, the soil about the trees should be frequently stirred, all weeds destroyed, and every obstruction to their progress removed: and as those employed for shelter encroach upon the permanent specimens, they should be curtailed, and, when necessary, wholly removed; in fact, their removal should be effected before they encroach. By thus progressively destroying the shelter, sometimes a few branches, and occasionally a whole tree, as circumstances seem to demand, the change is gradually produced and no injurious check results to the remaining plants. Of course, the shelter from the boundaries of the groups, and from the most exposed situations, will be the last removed. And for the purpose of giving depth and massiness to some of the larger groups, a part of the common trees may be left as a back-ground to the more valuable specimens. And such an arrangement could be provided for to a greater extent by keeping it in view when planting.

"It will frequently be found highly advantageous to include what are ultimately to be detached groups and single trees into one common plantation when young. A greater amount of shelter will be afforded, and each tree, while it assists to protect the other, will participate in the general benefit. And when the whole of the shelter is ultimately removed, the permanent trees will appear in their intended positions and relations.

* So sensible are the Scotch planters of the disadvantage of employing large trees upon their bleak mountain sides, that the neighboring nurserymen find plants beyond two or three feet high as almost dead stock; the sale for such being so limited, that any forest trees beyond that height are generally rooted out and used as fire-wood.

"The great change of climate which plants experience when removed from the nursery to open and exposed situations, is a principal cause of their frequent failure there. The comparatively dry state of the atmosphere in the latter is not the least prominent source of injury. Wherever vegetation is scanty, there will the atmosphere be deficient in moisture, a subject of great importance when considered in relation to the progress of young trees. And as vegetation not only participates in the benefits, but materially augments the atmospheric moisture, of a district, it follows that, by employing other trees as shelter to those we are most solicitous about, we combine several essentials to success, viz., breaking the force of winds, affording a genial shelter, and condensing and retaining a large amount of moisture.

"What is termed 'dead' shelter, *i. e.*, close hedges, reed fences, and similar expedients, is often employed as temporary protection to young trees in exposed places, but the advantages derived from such, to say nothing of its many inconveniences, and its anything but attractive appearance, is not nearly so great as that arising from the employment of living trees. The former is every day decreasing in efficiency, the latter becoming more valuable.

"With due attention to the several points which have been dwelt on, viz., draining, trenching, shelter, and a proper selection of plants, aided by a thorough system of subsequent management, success will be attained in almost any situation, and under a great diversity of circumstances. Failures in planting oftener arise from an injudicious or imperfect course of treatment, or from a bad selection of plants, than from anything really antagonistic in the soil or situation."

Answers to Correspondents.

I THINK highly of two articles in your August number—the one on "Shelter," and the other on "Raising Fruits from Seeds." On these views I have been humbly practicing, as you may recollect by my private letter a year or more ago. I will only say now that my additional observation and experience greatly strengthen the views I then expressed, and which you have so ably advocated in your very useful periodical. I set it down as an axiom, that the two great points are, to improve the climate on the one hand, and on the other, by a reproduction from seeds, to adapt the finest fruits to our climate.

My wood, of which I wrote you, and which I am leaving around my small orchard lots, is deciduous, and it has been, and still is, a part of my plan to change it gradually, so as to be in considerable part evergreen. For this purpose I have been looking considerably to the common Hemlock, White Pine, and Red Cedar, as being indigenous, and I have now a lot of young Cedars from seed, and thousands of small Hemlocks, on which I have been experimenting, and I intend planting pretty largely the coming spring. But small Pines are not easily got, and I shall be greatly obliged to you, or your correspondents, for the best and cheapest mode of procuring—

1. White Pine seeds, including the time of their ripening on the trees, and the time and manner, and most suitable soil, for sowing.

2. The same of Pitch or Yellow Pine.

3. Where, and at what probable prices, the following seeds can be had, viz.: Arbor Vitæ (native and foreign), Norway Spruce, Fir, and the Himalayan Cedar, and any other evergreen the seeds of which can be readily procured and easily grown. Those who are desirous of sheltering gardens, can well buy; but those who want to plant large numbers, will do best to grow them from seed, and have them on the ground at the right period for planting.

4. The best soil, time, and manner of planting. ELI NICHOLS.

The White Pine, Yellow or Pitch Pine, and American Arbor Vitæ, can be easily collected in many parts of the country. We do not know the usual prices. Mr. JOHN DICK, of Kingsessing, Philadelphia, has occasionally supplied us with seeds of native trees. The

Chinese Arbor Vita, Norway Spruce, &c., you must import. Mr. G. G. SHEPARD, of New York, who is agent for some of the best foreign seedsmen, can obtain them for you. The most successful way we have tried of growing evergreens from seed in the open air is, to select a strip of light sandy soil, say eight feet wide, surround it with boards, to make it like a box. Sow the seeds in this, and make a cover or awning of heavy sheeting to place over it at the distance of eighteen or twenty inches from the surface of the ground. This keeps off the hot sun, and not only promotes the vegetation of the seed, but prevents the young plants from being scorched when they push through the ground. Of course, the beds must be kept regularly and very carefully watered. The awning might be withdrawn at night.

On the street in front of my residence is a handsome row of Elms and Button Balls of some fifty years growth, with two Ash trees included. On either side of these two Ash trees the Elm is sickly, and only about half the size of the others. It has been suggested that the Ash injures the Elm and other trees, when brought into immediate proximity. Can you enlighten me on that point? If it is so, I will remove the Ash trees to save the Elms, which I think will soon die. (1.)

I have an Osage Orange hedge, planted a year ago last spring, about twenty rods long, separating my lawn from my carriage-road. I want to make a hedge about four feet high. How much wood should I leave each year in cutting it down? and as it is very vigorous, would it answer to cut it down twice each season? and if so, what time in the summer? (2.) J. W. F.—*Milford, Conn.*

(1.) The Ash, having immense masses of fibrous roots that rise nearly to the surface of the ground, is injurious to the growth of grass, or any other plants in its shade or near the roots. We have never known or heard of it being otherwise injurious to trees or plants growing near it. If the roots of the Ash trees on your grounds are injuring the neighboring Elms by appropriating their food, cut a trench around them pretty close up to the tree, and the difficulty will be remedied.

(2.) Your Osage Orange hedge should have been cut down last spring (April), within four or five inches of the old wood; then, if it grew freely, it should have been cut again in July, leaving about three or four inches of this season's growth. We cut ours *three* times a year, and it has a good effect. Instead of allowing long shoots to be made and cut away, the frequent shearing throws the growth into the lateral shoots and *thickens* the hedge, which is the great point aimed at. The time to cut is when a crop of strong shoots have been thrown up from the top of the hedge, like a brush, and when these shoots have attained maturity enough to show perfect buds on the lower parts intended to be left.

If it is conceded (as it seems to be) that iron filings, bone dust (or some constituent of that kind), and unslaked lime are the best ingredients to apply to pears on quince stocks, will you have the goodness to inform me (and I dare say many of your readers may also be profited by this information) how to proportion these materials, and how much of the preparation should be applied to small Pear trees one year from the bud: also, how much to large standard Pear trees? AN OLD SUBSCRIBER.—*Sand Hill.*

We have no particular experience in the application of these materials to Pears. Bone dust, however, we know to be a valuable fertilizer, and in poor soils we should think a quart worked into the surface of the soil as a top dressing would be sufficient for a yearling tree, and a peck would not be too much for a large standard tree. Perhaps some of our readers may have experience in these matters.

I WAS much annoyed last spring with a large reddish-brown bug, dark on the back and reddish on the under side, that attacked many of my young trees, stripping them entirely of their leaves and blossoms. The Plum and Cherry they seem particularly attached to, though they prey upon Pears, Roses, Horse Chestnuts, Abeles, Elms, &c., &c., eating all young and tender leaves as fast as they make their appearance. From one Cherry, about eight feet high, I picked off over two hundred and fifty in one evening. I endeavored to save a few kinds of cherries that I was anxious to test, but after destroying from 1000 to 2000 a night for over a week, and seeing no diminution of numbers, to appearance, I gave it up in despair. Should they increase in numbers another year in the ratio bugs and caterpillars usually do, they must do an immense damage, as they work nights when it is less convenient to fight than it would be by day. Now I wish to ask if you can tell what the habits of the bug are, and how much we shall have to fear from them hereafter, and if any thing can be done toward extermination!—*Trumansburg, N. Y.*

The insect referred to must be the May beetle (*Phyllophaga quercina*, of HARRIS' Treatise), very destructive both in the perfect and grub state. The grub is whitish, with a brown head, living in the earth and feeding on the roots of plants. Last spring it was unusually abundant—entire garden crops, strawberry beds, young trees, &c., were indiscriminately destroyed by it in all quarters. In gardens the grub should be continually sought for and destroyed in spading the ground. Add to this throwing up the ground to the action of frost in winter, and apply salt, soot, &c., this pest may in a great measure be got rid of. The perfect insects attack the leaves, operating in the night. They may be shaken from the trees either at night or early in the morning upon cloths spread out to receive them, and, as Prof. HARRIS suggests, be killed by throwing them into boiling water.

In your August number, page 386, you say thus: "We do not believe it impossible for pistillate plants to produce fruit without the aid of staminate, for we have abundant evidence to the contrary." And in your September number, page 399, you say: "It is well understood, and has been for fifty years, that no variety wanting in stamens will bear a crop by itself." Please state which of these is your *actual opinion*, for when such contradictions appear we don't know which side you are upon. WM. R. PRINCE.—*Flushing, L. I.*

Our *actual opinion* is this: that a pistillate by itself may, and often does, produce fruit to some extent, but that to ensure what is called a crop it is absolutely necessary to plant staminate near them. This is plainly enough what was meant by the remark you have quoted.

CAMPOR VS. PEA-BUGS.—Having observed in the *Horticulturist* an inquiry relative to seed peas damaged by bugs, I will offer a remedy, perhaps not new, but new to me. Four years ago last spring my seed peas were more than half destroyed by bugs, the largest and best varieties being most injured. The summer following I had boxes made, one for each variety, with a cover; and when the peas were gathered, I put into each box, with two quarts of peas, from six to eight bits of gum camphor, the size of a large pea, and mixed them together, and closed the box. The next spring there was not a pea injured. I have pursued the same course every year since, and have not had one pea affected by buga. J. BERRY.—*Channahon, Ill.*

FRUITS RECEIVED.—*Plums*.—Fine specimens of *Dennison's Superb*, *Dorr's Favorite*, and *Howard's Favorite*, from E. DORR, Esq., Albany, N. Y. These are all large and handsome varieties of good quality. *Dorr's Favorite* is the best, being nearly first rate.

Pears.—The *Pulsifer*, from SMILEY SHEPHERD, Esq., Hennepin, Ill. *Hosenschenck*, or *Schenck's August*, from Messrs. THORP, SMITH, HANCHETT & Co., Syracuse. *Kirtland*, from Dr. KIRTLAND, Cleveland, Ohio. This is an excellent variety, and the specimens sent were of much larger size than we supposed this variety ever attained.

Horticultural Societies.

THE New York Horticultural Society is making some effort to establish some sort of an experimental garden. In their proceedings they speak of it as a "Horticultural Garden." We presume it is intended to be something like Chiswick to the London Horticultural Society; we hope they will succeed. The wealthy citizens of New York should give it their countenance and support freely and liberally, that the great commercial metropolis may have a horticultural institution worthy of her. The costliness of dwellings, hotels, restaurants, places of amusement, dress, modes of living, &c., knows no bounds in New York, and has no parallel any where. Will they do nothing for horticulture but purchase bouquets? We shall see.

ALBANY AND RENSSELAER HORTICULTURAL SOCIETY.—The following is the list of premiums awarded at the Annual Show of this Society, held at Van Vechten Hall, Albany, September 7th and 8th, 1853:

FRUITA.—Apples—For the best and most extensive collection, to Dr. Herman Wendell, \$2, for the best. For the second best, do., \$2.

Pears—For the best and most extensive collection (sixty-five varieties), to Dr. Wendell, \$3. For the second best (thirty-six varieties), to James Wilson, \$2.

For the best six varieties, to E. Corning, Jr., for Louise Bonne de Jersey, Seckel, White Doyenné, Gansell's Bergamot, Barlett, and Doyenné Gris, \$2.

For the best one variety, to James Wilson, for White Doyenné, \$1.

Peaches—For the best and most extensive collection, to Dr. Dickson, of New Scotland, for six varieties, \$3. For second best, one variety, to J. Mayell, \$2.

For the best three varieties, to J. M. Myers, of Bethlehem, for President, Morris White, and Early York, \$2.

Best one variety, to J. S. Gould, for Royal George, \$1.

Plums—For the best and most extensive collection, to E. Dorr, \$3. For the second best five varieties, to V. P. Douw, \$2.

For the best Seedling, to E. Dorr, for a large and very beautiful variety, called by Mr. D. "Howard's Favorite," \$2.

Nectarines—For best two varieties, to J. S. Gould, for Elruge and Red Roman, \$2.

For the best one variety, to J. S. Gould, for Red Roman, \$1.

Quinces—For best exhibited, to J. S. Gould, \$1.

Grapes—For the best one variety of foreign, open culture, to J. S. Gould, for Golden Chasselas.

Grapes, Native—For the best and most extensive exhibition, to E. Dorr, for four varieties, \$3.

For the best two varieties, to J. S. Gould, for Catawba and Isabella, \$2.

For best one variety, to Mrs. James Gould, for Isabella, \$1.

Grapes, Foreign—Grown under glass, to Joel Rathbone, for a collection of nine varieties, all of which were beautifully colored, and in very large clusters, \$3.

For the best two varieties, to E. Corning, Jr., for Zinfandel and Black Hamburg, \$2.

For best one variety, to E. Corning, Jr., for Grisly Frontignan, \$1.

C. P. Williams, Esq., sent in a collection of four varieties, too late for competition, all of which were in large sized clusters and berries, as well as highly and beautifully colored.

For basket of assorted fruita, to Mrs. Van Namee, of Pittstown, \$2.

Mrs. Van Namee also exhibited a collection of native fruits, which attracted much attention, and to which the committee awarded a diploma.

GREEN-HOUSE PLANTS.—The committee notice that the premium awarded at the June exhibition to V. P. Douw, for three best Pelargoniums, was by mistake credited to L. Menand, and wish to correct the error.

The committee report that there was exhibited a large number of very choice plants in pots, and evergreens, which were exceedingly well grown, and show great skill in their culture. The collection shown by L. Menand was particularly worthy of notice, but he refused to enter them for competition. They award the premium.

Best ten Plants, to E. Corning, Jr.; Morris Walsh, gr.—For *Manettia coccinea*, *Erica transparens*, *Amyrillia vitatta*, *Vincas* roses and alba, *Ixora crocata*, *Taberna-montana coronaria*, *Bouvardia triphylla*, *Lantania* (species).

Best six Plants, to Joel Rathbone; Wm. Bennett, gr.—For *Vinea alba* and rosea, *Allamanda Schottii*, *Cuphea platycentra*, *Plumbago larpena*, and *Achimenes longiflora*.

Best three Plants, to E. Corning, Jr.—For *Heliotropium Peruvianum*, *Abelia rupestris*, and *Cuphea platycentra*.

Cut Flowers—*Dahlias*—Best and most extensive display, to James Wilson, for fifty varieties, \$2.

Best twelve dissimilar blooms, to James Wilson, for Mogul, Seraph Ressegner, Madam Zahler, Lady of the Lake, Tippecanoe, Cleopatra, Constantia, Lady Sale, Joshua Longstreth, \$2.

Best six dissimilar blooms, to James Wilson, for Joshua Longstreth, Walter Hillson, Rainbow, Belle de Paris, Mogul, Tippecanoe, \$1.

Best Dahlia, to James Wilson, for Box.

Phloxes—Best ten distinct varieties, to James Wilson, for Princess Marianna, Acuminata alba, Reine des Phloxes, Beliraine, Eliza, Harrisonii, Marius, Alba purpurea, Speciosa, Eucharis, \$2.

German Asters—Best and most extensive display, to Wm. Newcomb, for twenty varieties, \$2. Second best, to E. C. McIntosh, \$1.

Verbenas—Best twelve varieties, to James Wilson, for Blue Bonnet, St. Margaret, Climax, Orb of Day, Defiance, Isabel, Viscata, Amazon, Smith's Exquisite, Iphigene, Blue Defiance, General Brea, \$2.

Best six varieties, to Mrs. Van Namee, for Beauty Supreme, Defiance, St. Margaret, Striped Eclipse, Jenny Lind, Harlequin, \$1.

Native Plants—Best exhibition, to Mrs. Van Namee, sixty-five varieties, \$2.

Bouquets, Floral Designs, &c.—Best round vase, to James Wilson, \$2.

Best flat parlor, to Mrs. J. T. Van Namee, \$2.

Best round hand, to J. Wilson, \$1.

Best flat hand, to James Wilson, \$1.

Best basket bouquet, to Mrs. J. T. Van Namee, \$1.

Best floral design, to Mrs. J. T. Van Namee, for a beautiful floral table, surmounted by a canelabra, \$3.

The committee wish particularly to commend the basket bouquets, entered by Mrs. V. P. Douw, of Greenbush, and regret that they did not come within the rules.

VEGETABLES.—The committee report that there were but few vegetables exhibited; that those were good, generally, and in some instances very fine.

The committee very much regret that vegetable growers in this vicinity do not take more interest in these exhibitions. The finer products, such as fruit and flowers, seem to be engrossing attention to the exclusion of more substantial ones. The vegetable department, supplied, as it might be, from the upland and island gardens of this vicinity, would be as attractive and instructive as any in the exhibition, and it is earnestly hoped that those having it in their power will, hereafter, make liberal contributions, so that this part of the show may command its proper position.

The principal exhibitors were Messrs. E. Corning, Jr., Wm. Newcomb, John S. Gould, V. P. Douw, E. C. McIntosh, W. C. Halsey, &c.

Premiums are awarded as follows: Wm. Newcomb, of Pittstown, for the best six specimens of Martinisa, \$1. E. Corning, Jr., for the best Winter Squashes, \$1. V. P. Douw, six specimens Long Blood Beet, \$1. John S. Goold, six specimens Carrots, \$1. V. P. Douw, six specimens Parsnips, \$1. E. C. McIntosh, six specimens Egg Plants, \$1. V. P. Douw, two heads Winter Cabbage, \$1. E. C. McIntosh, six roots Celery, \$1. E. C. McIntosh, half a peck Tomatoes, \$1. Wm. Newcomb, best exhibition different varieties Tomatoes, \$1. V. P. Douw, best specimens Okra, \$1. John S. Goold, best Citron Melon, \$1. E. C. McIntosh, two varieties Watermelon, \$1.

JOSEPH WARREN, *Secretary*.

HERMAN WENDELL, M. D., *President*.

PENNSYLVANIA HORTICULTURAL SOCIETY.—AD INTERIM REPORT OF THE FRUIT COMMITTEE FOR JULY AND AUGUST.—The Fruit Committee respectfully report, that since the June meeting of the Society the following specimens of Fruits have been submitted to their examination:

From Mr. TAGG, of Burlington.—Fine specimens of the *Moyamensing* strawberry. A description of this valuable variety was given in the last ad interim report.

From the Rev. S. C. BRINCKLE, Wilmington, Del.—Specimens of three varieties of cherries:

1. *Büttner's Yellow*—Rather large, heart-shaped, of a waxen yellow color; stem from an inch to an inch and a half long, slender, inserted in an open superficial cavity; stone small; flesh firm, yellowish-white; flavor sweet and fine; quality "very good."

2. *Late Bigarreau*—A seedling of Prof. KIRTLAND; large; obtuse heart-shaped; bright crimson, delicately mottled; stem an inch and a half long, inserted in a wide, open cavity; stone medium; flesh firm, crisp, yellowish-white; flavor pleasant; quality "very good."

3. *Büttner's Morello*—Of medium size; roundish; deep crimson; stem an inch and a quarter long, slender, inserted in a deep moderately wide cavity; flavor acid; quality scarcely "good."

From Dr. E. W. CARPENTER, Lancaster.—Magnificent specimens of four varieties of cherries:

1. *Napoleon Bigarreau*—Very large, some of them weighing eighty-four grains Troy. A branch fourteen inches long contained seventy cherries, and weighed eleven ounces, of which the wood and foliage constituted two ounces. This is a very productive variety, and of "very good" quality.

2. *Grafton*—Another very productive variety of "very good" quality. Some of the specimens were even larger than those of the *Napoleon Bigarreau*, and weighed ninety-two grains Troy. A branch seven inches long, containing forty-four cherries, weighed seven ounces, including the wood and foliage which weighed one ounce.

3. *English Morello*—Remarkably fine, nearly three inches in circumference; quality "best" for culinary purposes.

4. *Early and Late*—In size, form, color, and quality, very similar to the preceding.

From Mr. CASPER HILLER, Lancaster county.—Very handsome specimens of four varieties of cherries:

1. *Conestoga*.—This fine variety originated in Conestoga township, Lancaster county, Penn. Fruit very large; obtuse heart-shaped, slightly indented at the apex; dark purple; stem from an inch and three-quarters to two and a quarter long, slender, inserted in an open cavity; flesh purplish, firm; flavor sugary and very pleasant; quality "best."

2. *Black Tartarian*—Fine specimens of this delicious variety.

3. *Grafton*—Known also as the *Amber of Coze*, the *Yellow Spanish*, and the *Bigarreau*. Fair specimens.

4. *White Bigarreau*—Common in our market. Sometimes confounded with the *Grafton*, from which it differs in being more regularly heart-shaped and of a lighter color.

From ALEXANDER PARKER, of this city.—Four varieties of plums:

1. Seedling plum—Beautiful specimens, resembling the *Mirabolan*. Above medium, round, scarlet; stem half an inch long, slender; flesh greenish yellow, juicy; flavor ordinary; quality "good" for the season; period of maturity last of June and beginning of July.

2. Another seedling—A few days later than the preceding, but in other respects very similar to it.

3. *Parker's Mammoth*—Very large, nearly six inches in circumference. It closely resembles the *Washington*, with which it is probably identical.

4. *Bingham Plum*—Beautiful specimens. Large; truncated oval; greenish-yellow, occasionally with delicate carmine dots on the exposed side; suture on one side extending from the base to the apex; stem three-quarters of an inch long, by one-twelfth thick, inserted in a deep, narrow depression; stone adherent; flesh yellowish, juicy; flavor pleasant; quality "very good."

From ISAAC B. BAXTER.—The *Musck Musck Apricot*, and a plum imported from France as the *Royale Hative*. The latter is not true to name, as the color of the *Royale Hative* is purple. The specimens exhibited by Mr. BAXTER were large; oval; of a green color; unadherent; quality "very good."

From ALAN W. CORSON, Montgomery county.—A box of pears grown on the premises of Mr. SCHLATER. Size medium; long pyriform; yellowish-green, and on the exposed side sometimes a fawn colored cheek with a few red dots; stem an inch long by one-eighth thick, inserted occasionally somewhat obliquely and without depression; calyx set in a superficial basin; seed small, black, often abortive; flesh yellowish-white, rather granular, moderately juicy; pleasant flavor; quality "good." The variety is probably the English *Jargonelle*, the *Epargne* of the French.

From THOMAS HANCOCK, Burlington, N. J.—Specimens of eight varieties of pears: *Edwards' Meadows*, quality indifferent. *Dearborn's Seedling*, "good." *Bloodgood*, "very good." *Manning's Elisabeth*, "very good." *Rostizer*, "best." *Tatnall's Harvest*, scarcely good. *Bauré d'Amalia*, fine specimens. *Limon*, "very good."

From ROBERT BURN.—Twelve varieties of pears and two of apples:

The specimens were beautiful, but not sufficiently mature to test their quality. They comprise the following kinds: Pears.—*Andreea*, *Barlett*, *Belle de Bruzelles*, *Bauré Goubault*, *Capiamont*, *Collins*, *Crassane*, *Doyenné Defais*, *Flemish Beauty*, *Julienne*, and two unknown. Apples.—*Irish Codlin*, and *Rambour d'Été*.

From SAMUEL OTT.—Two varieties of plums and three of pears:

1. A seedling plum, raised by JOHN COPE, of Southwark. Large; an inch and three quarters long by one and a half broad; long oval; dark purple; stem three-fourths of an inch long, slender; flesh not very juicy, free from the stone; flavor acid; quality "good" for culinary purposes.

2. A cling variety of the *Red Magnum Bonum*; very large; oval; purple; stem five-eighths of an inch long by one-twelfth thick; quality "good."

3. The *Julienne* pear—Fine specimens.

4. The *Tyson*—Handsome specimens; quality "best."

5. The *Ott*.—This is the fifth consecutive year that we have had an opportunity of testing the quality of this fine Pennsylvania fruit, which we regard as the most delicious of all summer pears.

KENTUCKY HORTICULTURAL SOCIETY.—The drenching rain of Saturday did not prevent our spirited horticulturists from bringing many fine specimens of fruits, vegetables, and flowers to the regular weekly exhibition.

In peaches we noticed Leopold, Grosse Mignonne, Red Magdalen, Crawford's Late, Pavie Pomponne, Yellow Admirable, and Grosse Admirable, from the President, L. Young. Buena Vista and two nameless varieties, from O. Hite. Grosse Mignonne, Columbia, and a seedling from G. Herr. Large Melocoton, from G. Heinsohn, Samuel Craik, R. Hoskins, and Mrs. Holloway, of Richmond, Ky. Crawford's Late, from Mrs. Holloway, of Richmond. Admirable, from J. L. Kalfus, J. Johnson, and S. Cassaday. Catherine, Buena Vista, and Cary's Seedling, from C. C. Cary. Druid Hill and two nameless varieties, from Judge Robertson. Heath, from Samuel Craik

Pears.—We noticed fine specimens of Bellflower, Taylor, and Seckle, from George Herr. Bergamot, White Doyenné, and Preserving Pears, from C. C. Cary, Bartlett and Ambrosia, from L. Young. Bartlett, Summer Beauty, and Summer Bergamot, from J. L. Kalfus. White Doyenne, from Dr. Galt and Wm. Mix. A nameless variety from Judge Robertson.

Apples.—Holland Pippin and Maiden's Blush, from Judge Robertson. Holland Pippin, from J. Stivers. Burns' seedling and Hawthornden, from G. Heinsohn. Rambo, extra large and fine, from N. Arterburn. Gloria Mundi and a seedling, from E. D. Hobbs. Maiden's Blush, from Dr. Galt.

Quinces.—Fine specimens from W. L. Prather & Brother, Mrs. Peay, and N. Arterburn.

Watermelons.—Long Island, weighing 40, 41, and 41½ pounds, from Mr. Nicholson.

Egg Plants.—extra fine and large, measuring 26 inches around, from A. G. Munn.

Bull-nose Sweet Peppers.—the best shown this year, from Capt. James Rudd.

Early Celery.—from A. G. Munn.

Grapes.—Isabella, Norton's Seedling, Heabemont, Madeira, from Dr. Galt. Red Sweet-water, from Frederick Kaye. Catawba, from A. G. Munn, M. Way, and Dr. Galt.

Plums.—Yellow Egg, a matchless, fine, large basket of this splendid plum, from J. B. Anderson. Yellow Egg, from F. Kaye and G. Herr. Italian Prune, Victoria, and Lombard, from L. Young. Yellow Gage, from G. Herr. Etty's Gage, from N. Arterburn. Small yellow plum, from Mrs. Holloway, for a name, Richmond, Ky.

Nectarines, from F. Kaye.

Filberts, very large and fine, from N. Arterburn.

Boquets, from Mrs. Peay, Mrs. E. Dorsey, E. Wilson, Miss Winstanley, E. D. Hobbs, M. Bopert, and H. Nantz. Box of exquisite flowers, delicately arranged, from Mrs. Hancock, and a beautiful center-piece from Mrs. Peay.

The sales on Saturday next will be appropriated to the "DOWNING MONUMENT," and an earnest appeal is made to all growers and lovers of fruits and flowers to make a noble contribution to the memory of one who has done more than any other individual to elevate the standard of taste, and to give an impulse to pomology and floriculture in this country, the benefits of which we are now enjoying. The officers of the Society, who have devoted their time and services to the encouragement of its objects, and who have derived no pecuniary benefit whatever therefrom, solicit from the cultivators, who have been enjoying the proceeds of the spirited sales at each exhibition, a generous contribution of their finest fruits and sweetest flowers, as an offering to enshrine the memory of their greatest and best friend! The names of the contributors, together with the amount of the sales of their contributions, will appear in the usual published reports of the Society. We trust that no name with which the public has become familiar during the present fruit season will be found wanting on this praiseworthy occasion.—*Louisville Courier.*

BERKSHIRE (MASS.) HORTICULTURAL SOCIETY—STOCKBRIDGE MEETING, SEPT. 9.—Although the meeting was called on very short notice, yet it was well attended, and the exhibitions of flowers, fruits, and vegetables were extensive and of very fair quality. The citizens of Stockbridge fully sustained the character they had before so richly earned—of strong devotion to the interests of the Society, and of hospitality to the world in general. The tables, decorations, and all the *et ceteras* at the Town Hall were in excellent order. The songs of the Stockbridge Juvenile Choir gave an item of interest of great worth, commanding the applause and gratitude of all. The exhibition of peaches was the best we have ever seen in this county, and contained one or two of the finest we ever saw any where. The pears, plums, and apples were good.

In flowers the exhibition was by far the finest we have had, no frost having touched the most delicate flower.

In vegetables, a period two weeks later might have shown some larger ones, but those presented were large enough.—*Culturist and Gazette.*



DOYENNE D'ETE' PEAR.

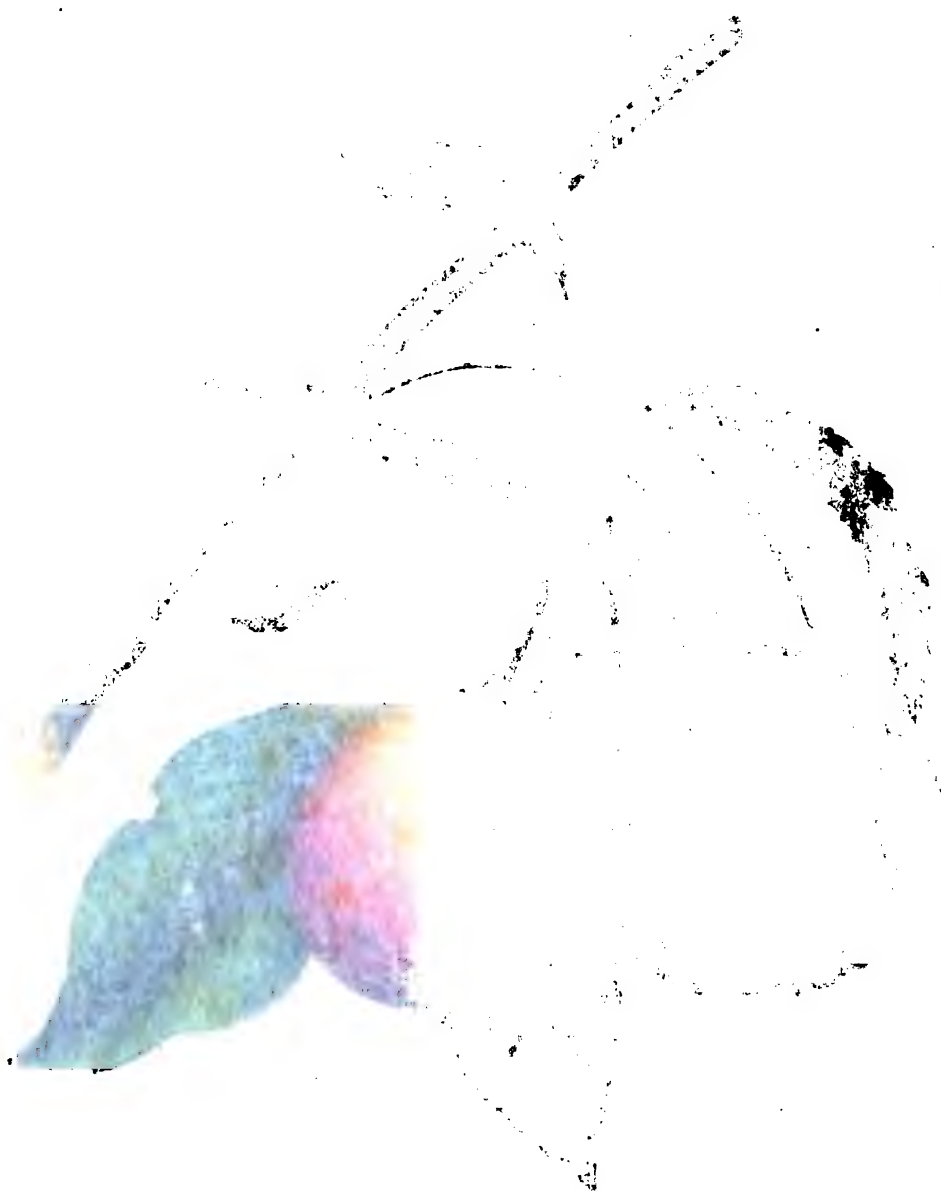
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DOYENNE D'ETE' PEAR.

Hints on the Management of Small Gardens.



ONE of the finest features in the country towns of America, is that almost every dwelling has its garden—small in many cases it may be, but still a garden, and capable of yielding many of the comforts and pleasures of gardening. The most active improvers of our day, the men who are really doing most for the diffusion of a taste for gardening, are the residents of country towns and villages, with their acre, half acre, and even quarter acre lots. Taking this view of the subject, we naturally regard the management of small gardens with much interest; and therefore propose, now and hereafter, to offer a few hints, in order if possible to establish more correct views in regard to the principles which should regulate their formation and treatment.

From pretty extensive observation, we have come to the conclusion that one of the most serious and prevalent errors in the management of small gardens, is *attempting too much*. This grows very naturally out of the desire that almost every man feels to gather around his residence the greatest possible variety of interesting scenes and objects; in other words, to make the most of his limited space. In laying out a garden, the design may be good, and it may, in the first place, be properly executed; but no sooner is this done than new trees or plants are fancied, and probably a neighbor's garden suggests some new walks or divisions—and thus one little alteration after another is introduced, until the original plan is effaced, and the whole becomes a piece of patchwork. We have seen many charming little front gardens utterly ruined in this way. Now, the beauty of a small garden, and the pleasure it may afford, lies not in a great variety of embellishments, but in *simplicity* and *high keeping*—few walks and few trees.

Numerous walks destroy the unity and extent of a small piece of ground, and add very materially to the cost of keeping; and as a regular gardener is seldom employed in such places, the walks become neglected, and grown over with grass and weeds, resembling more a cattle path than any thing else. The principle, therefore, should be rigidly adhered to, of having only such walks as are absolutely indispensable, and these to be kept in the best order. A good, well-kept walk, is not only a great beauty but a great comfort, whereas nothing is so useless and ill-looking as a bad or neglected one. In most cases a single walk, and that a foot walk, six or eight feet wide in proportion to the extent of the ground, will be quite enough.

The position of the entrance gate and the course of the walk must be determined by the shape of the grounds and the situation of the front door of the dwelling. If the space between the house and street be narrow—say twenty or thirty feet—and the front door be in the center of the building, the most convenient, and probably the best, arrangement is the common one—having the gate opposite the door, and the

walk straight. It would be much better if houses of this kind were so constructed as to have the main entrance at one side, so that the ground in front of the principal rooms might be kept in a lawn, embellished with a few appropriate trees. This would be a more agreeable sight from the windows than a gravel walk, and persons approaching the house would not be directly in front of the windows. When the house stands back a sufficient distance, even if the front door be in the center facing the street, the walk should approach it by as easy curves as possible from one side, leaving the ground in front unbroken. A curved walk, however, is not only inconvenient, but obviously inconsistent, in a very limited space.

Box, and all other kinds of edgings, to walks that run through grass plots, are not only out of place, but add greatly to the expense of planting and keeping. Such things are only appropriate in flower gardens, to mark the outlines of walks and beds. Hedges of Privet, Red Cedar, or Arbor Vitæ, are occasionally planted along the edges of walks, but are entirely superfluous, and have a bad effect, unless to screen a wagon road to out-buildings, or to separate a front garden or lawn from the kitchen garden, or such objects as it may be desirable to conceal. Such hedges have also a very good effect when placed immediately behind a low open front fence, forming, in that case, a background to the lawn, when viewed from the dwelling.

Planting, in most of our small gardens, is carried to such an excess as to convert them into miniature forests. There must be the universal row of Horse Chestnuts, or something else, within the fence; and then the interior is dotted over closely with all manner of shrubs and plants. A corner is probably cut up into something like a child's flower garden; small beds, filled with tall, straggling plants, lying over the Box edgings, covering the walks, and giving to the whole a neglected and confused appearance. Such management displays no taste, and gives no satisfaction.

We would discard these straight rows of trees, and convert the whole surface into as perfect a piece of lawn as could be made. This we would embellish with a few—very few—appropriate trees, mostly evergreens, having as great a variety among them as possible, both in regard to habit of growth and tint of foliage. The smallest plot, managed on this principle, may be made beautiful. A single tree, such as a Norway Spruce, a Deodar Cedar, a Hemlock Spruce, or any other fine evergreen—or even a deciduous tree, such as a Magnolia, a Tulip tree, a Linden, Horse Chestnut, or Mountain Ash—standing on a lawn, having ample space on all sides to develop its fair, natural habits and proportions, is always a beautiful object, and cannot fail, though a common tree, to attract attention and admiration; but plant three or four, or half a dozen, such trees where one should be, or crowd up the one with undershrubs and other objects, and you at once destroy the character and expression of the tree, and produce a confused mass, that can not fail to be disagreeable to every one whose taste has been even slightly cultivated.

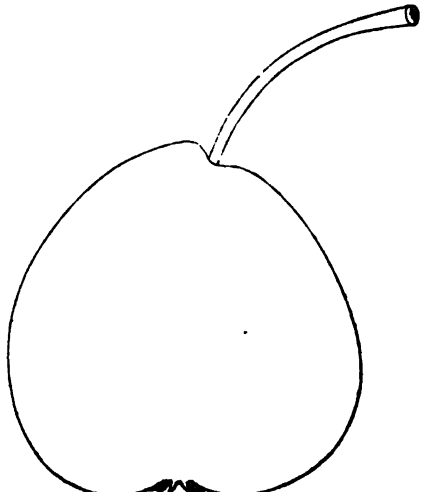
Few people seem to appreciate fully the beauty of a piece of lawn—a beauty which is at once cheap and permanent. Most of us desire to be economical; but what economy is there in cutting up small gardens into walks, flower borders, and beds, and in planting them all over with trees and plants? These walks and borders need

constant care, or they soon become unsightly; they need a constant succession of flowering plants, to keep up a display. The culture of flowers along borders and among trees, is never successful or satisfactory. They must have a place allotted to themselves, where they can be tastefully grouped and receive proper attention. A very important point is the selection of suitable trees for small gardens. We very often see trees of the largest class planted where there is no room for them, simply because such trees are planted in every garden. The little front gardens of street houses in some of the English towns delight every one who sees them, by the appropriateness of their arrangement and ornaments. A spot of bright green lawn, garnished with two or three Laurels or Rhododendrons, and some climbing Roses or Honeysuckles around the windows, and these all glittering with high polish, like a new coin from the mint—no cutting up into all manner of misshaped beds and borders, no entangled masses of trees and plants. We hope this matter will be considered, for a reform is greatly needed. We shall have more to say on the subject hereafter.

DOYENNE D' ETE PEAR.*

THIS variety, of which we give a portrait in the present number, is undoubtedly one of the best, if not *the* best, early pear we have. We consider it quite superior to the *Madelaine*, which ripens at the same time. It is one of VAN MONS' seedlings, we are told in the new *Annales de Pomologie* of Belgium, mentioned in his catalogue of 1823, and one of the invoice of 320 varieties of pears sent in 1833 to M. POITEAU; and he described it in the *Annals of the Hort. Society of Paris* in 1834.

Fruit—small, roundish, slightly turbinate, and very regular. Stalk—an inch to an inch and a half long, pretty stout. Calyx—small, open, in a very shallow basin. Skin—greenish-yellow, with a brownish-red and sometimes a bright red cheek—very beautiful. Flesh—yellowish-white, melting, juicy, sweet, and slightly musky. Should be gathered a few days or a week before ripe. The tree is an upright, vigorous grower, with moderately stout, grayish-brown shoots, thinly sprinkled with drab dots. It is very productive, and bears early both on pear and quince. On the latter stock it bears so profusely, like the *Bartlett*, as to need close pruning and high culture to sustain its vigor.



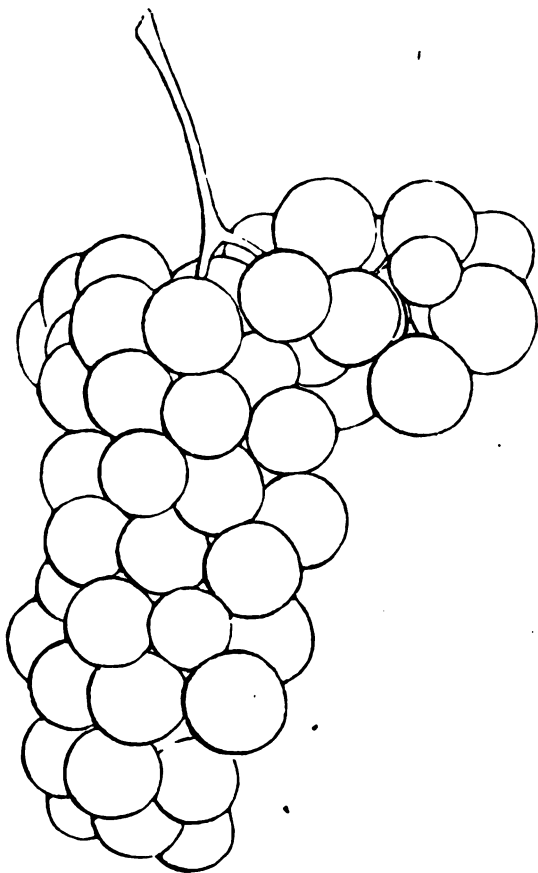
DOYENNE D' ETE PEAR.

* See Frontispiece.

As far as we know, this variety has proved excellent wherever it has been tried; and we have no hesitation in recommending it to a place in all collections. It ripens here about the last days of July, generally.

THE DELAWARE GRAPE.

ABOUT three years ago, Mr. BATEHAM, of the *Ohio Cultivator*, was kind enough to send us some bunches of this grape from an Ohio Fruit Growers' Convention. We



DELAWARE GRAPE.

small, very compact, sometimes shouldered. Berries—small, round. Skin—thin, of a coppery-rose color. Pulp—very little. Flavor—sweet, but sprightly and pleasant. We subjoin the communication of Mr. THOMPSON:

"I send you by express specimens of a grape that has attracted much attention in this region for a few years past, and increases in public favor as time more fully develops its

were much pleased with it, and took note of the discussions respecting its history and probable origin. At that time we determined to propagate it, but it slipped our memory, and we have heard or seen nothing of it since. Now we are favored, by A. THOMPSON, Esq., of Delaware, Ohio, with a box containing several well ripened, beautiful bunches; and we think more highly of it than ever. After tasting it we should say it is an American grape; but there has been gathered up considerable evidence of its foreign origin, and an old, intelligent vine-dresser, fresh from Germany, says that he should at once pronounce it the *Traminer*, but that it has a more musky flavor than that variety has in Germany. Its exemption from mildew is a remarkable feature in a foreign grape. The grape itself, as well as its history, is worthy of more attention. The bunch is

superiority. To us it is a stranger; and my object in sending it to you is to get your opinion as to its quality, and ascertain if it is known to horticulturists in your section. You will perceive that it is quite early, being now ripe, while *Isabellas*, more favorably situated, are just beginning to turn, and *Cataubas* are quite green—and that it is remarkably free from pulp, thin skinned, and of sprightly and pleasant flavor—in short, that it possesses all the characteristics of a first rate table grape. It is a prodigious bearer; bunches compact, though rather small; the berries of uniform size and quality, it being almost impossible to find one that is in any way defective. The vine is a vigorous grower—hardy, free from mildew, and ripens its wood (which is small and short-jointed) better than any with which I am acquainted. I regard it as a great acquisition, and certainly no fruit that has appeared has acquired greater popularity in the same length of time than this in the region where known.

"Being offered for sale in our streets a few years ago by persons from the country, it immediately attracted attention, and investigations instituted by myself and others showed it to be of foreign origin—having been one of a lot of vines sent more than fifty years ago to a gentleman in New Jersey by his brother residing in Italy. It was procured in the garden of the gentleman referred to, and brought to this country some sixteen years ago. Though its origin is clearly traced to a foreign source, I am inclined to think that instead of being taken from the original stock, it is probably a chance seedling from one of the Italian vines, for I have never seen or heard of a foreign vine that would flourish and ripen its fruit in our climate as this does. If it does as well and produces as good fruit in New Jersey as in this State, it is surprising that it has not ere this attracted the attention of eastern horticulturists.

"Mr. Longworth regards it as a foreign grape, and in a letter to me says: 'I have upward of one hundred bunches of the *Delaware* grape ripening. It compels me to back out and admit there is one foreign grape that suits our climate. I have failed with one hundred varieties. I wish to give it a fair trial for wine. It is a superior table grape.' And in a subsequent letter he says the German vine-dressers in that region who have examined it are divided in opinion—some pronouncing it the *Red Riesling*, while others think it is the *Traminer*, one of the most celebrated of the German wine grapes. The evidence preponderates in favor of its being the latter, and Mr. L., acting upon this evidence, has order a large number of the vines from Germany. He may be correct in supposing its identity clearly established; but if so, it is somewhat remarkable that in his former large importations (the object being to procure *wine* grapes) this, the most celebrated of any they cultivate, should not have been included; and it is no less remarkable that none of the Germans who have brought vines with them from the father-land, should have failed to include their favorite *Traminer*. A. THOMSON.—*Delaware, Ohio*."



FACTS IN ISABELLA GRAPE CULTURE.

BY E. A. MCKAY, NAPLES, N. Y.

SOME time ago, you may remember, you invited me to communicate to you such facts for publication as I might have met with in grape culture that would be likely to be of interest to the public. I had then recently planted one acre of *Isabella* Grape vines, pretty nearly after the manner you had advised in the columns of the *Genesee Farmer*.

The piece of ground planted is twenty rods in length by eight in width, and was planted five years ago last spring, in the following manner: About the first of May I gave the land, which is a gravelly loam, a very deep plowing—as deep as possible without the aid of a subsoil plow. I then measured it off into eight strips, or lands, running lengthwise, their direction being from north to south, 15 deg. east, and plowed these lands separately—leaving the dead furrow in the center of each, designating the places for the rows—breaking up the yellow subsoil by repeated plowings through the center of each to the depth of nearly two feet. I then went into these trenches with a stout team and scraper, and excavated holes a rod apart, still deeper than I had plowed, about six feet wide and eight feet in length, leaving the subsoil taken from them in the intervening spaces.

All this time I had my eye upon a *drove of cattle* (some eighty head), which had died in this town the previous March and April, while performing a pilgrimage from the far West to the New York market. These I procured of the proprietor, and had them cut into pieces of convenient size, and hauled to my field and placed in the holes prepared for their reception. There being one hundred and sixty holes, a half of a carcass was placed in each. This being done, the holes were filled about half full of good surface soil; upon this I distributed, as equally as possible among all the holes, sixteen heavy loads of decayed leather shavings, from a currier's shop—the accumulation, as I was informed, of about twenty years. A sufficient quantity of surface soil was thrown upon these, and thoroughly incorporated with them, to fill the holes rather more than level with the surface of the ground. Now, about a bushel of well-rotted stable manure, taken from under a stable, well mixed with about the same quantity of charcoal dust, from an old coal pit, was spaded into each place designated for the reception of a vine.

I then procured, of ELLWANGER & BARRY, good, strong, two year old vines, with which I planted one-half of this ground; and the other half I planted with layers of the previous year's growth, without a particle of top to any of them—each consisting simply of a short section of a vine of the previous year's growth, with one bud and a few small roots attached to it.

These vines have had no other manuring since they were thus planted, excepting about two bushels of leached ashes forked in around each vine last season, and about one quart of plaster applied to each the season before. They are trained on tellises, running from north to south, eight feet high, made of chestnut posts (for want of

cedar), five inches square at the bottom, and two and a half by five inches at the top, set eight and a quarter feet apart, with strips of one and a half inch stuff, two and a half inches wide, nailed from post to post, eighteen inches above the ground, and at the top of the posts. Between these, three tiers of No. 14 iron wire are drawn, dividing the space equally between the wooden strips, and secured to each post.

These trellises are now completely filled with good, strong, bearing wood, ready for use next season, much of which is over three-quarters of an inch in diameter; and large portions of it are now apparently ripe. I allowed these vines to bear only about seven pounds each last season, though they set for full three times that quantity. I rubbed off every alternate bud on all the vines last season; and after they were set for fruit I took off half of it. My fruit was mainly sold to dealers in Elmira, and retailed by them at fourteen cents per pound, by the side of *Isabella* grapes, cultivated near Penn Yan, at twelve and a half cents. One dealer, Mr. H. H. RISBARDS, afterwards informed me that he sold fifty-three pounds of my grapes in one evening at fourteen cents, and but three pounds of the shilling grapes. Do you suppose those dead carcasses had any thing to do with this? I do.

Last spring, before these vines commenced their growth, I measured some twenty-five or thirty of them, taking them "as they run," and I found but very few of them to measure only ten inches in circumference. Nearly all measured over a foot around the body, several of them fifteen inches, and one seventeen inches. But why did not those dead cattle and leather shavings kill them? Surely it is a marvel that they did not; for I have repeatedly dug down to the bones within the past two years, and have always found them completely surrounded with a net-work of *living* fibrous grape roots—not *dead* ones! I am allowing these vines to bear this season just half what they set for, after a severe autumnal pruning; and I estimate the present crop at 3,200 pounds, or 20 pounds to the vine, notwithstanding the hail storm on the 4th of July destroyed at least 1,000 pounds.

My grapes last season commenced making their first turn on the 1st day of September, and the entire crop was ripe before the 30th. This season they commenced turning red on the 20th day of August, and at this time (September 7th) more than 1,000 pounds are making the second turn. In fact, I have seen *Isabella* grapes offered for sale in Rochester, in the month of October, not as ripe as these are.

I will not say *positively* that my fruit is equal in flavor to that produced by more seemly fertilizing materials, for that would hardly seem possible; but I will send you a sample of it as soon as I consider it ripe, that you may have an opportunity to judge for yourself. One thing I have remarked in regard to these vines: no insects, of any sort, have as yet disturbed them, except that three or four of the vines, the year they were planted, were dug out by dogs in their nocturnal attempts at a premature resurrection of those dead carcasses! Mildew has never affected them, although, from their remarkable luxuriance of growth, I have expected to encounter much trouble from this most patience-trying scourge of the vineyard.

I have adopted the plan this season of mulching my vines with spent tan. I applied it early in July, having kept the vines thoroughly cultivated previously. I shall cover

the entire vineyard with it next season, about an inch deep. I have always plowed between the rows to the depth of five or six inches, to within a foot of the vines. To enable me to do this without disturbing the roots, I have practiced pruning off all the lateral surface roots to the depth of five or six inches, thus throwing the vines, to use a familiar phrase, "upon their taps." To this practice, I believe, ought to be attributed my exemption from mildew, far more than to any or all things else. I observed this same practice prevailed in Dr. UNDERHILL's vineyards, at Croton Point, though I am not aware that the doctor has ever given the fact to the public. If he has not, of course it is because he forgot to do so; or he may have thought it would not be of much interest to other cultivators of the grape. One fact is worthy of note: Dr. U. has experienced no difficulty from mildew for quite a number of years past, and his vines are very old; whereas, when his vines were young, he says he was much troubled with its presence. Now, all who know any thing about grape culture, well know that old vines, with ordinary culture, are far more subject to this difficulty than young ones. To my mind, this proves that the doctor is older than he once was, as well as his vines, and that he has not grown old to no purpose.

In conclusion of this already too long article, let me say: if you do not like the samples of grapes sent, suppress this account of their origin and culture, for they are the *argument* I most rely upon in the defence of my mode of grape culture. If this argument fails to produce conviction, I will yield the point; but if you like them, you may give me a hearing in the columns of the *Horticulturist*, if you choose to do so, that others may learn by what strange means good fruit may be produced, in spite of the abuse so profusely heaped upon "dead carcasses" by those who never take the trouble to give them a patient trial. Should you do so, you may hear from me again, when I have any other *Facts in Isabella Grape Culture* deemed of importance to the public.

FLOWERING OF THE NELUMBium SPECIOSUM AT SPRINGBROOK.

BY THOMAS MEEHAN, GARDENER TO CALEB COPE, PHILADELPHIA.

WHEN, in the autumn of 1851, Mr. COPE was enabled to acquaint Mr. DOWNING with the successful result of his munificent zeal in the cultivation of the far-famed *Victoria*, I am sure he little anticipated the fact that in two short seasons he would be entitled to claim from the horticultural world the credit of introducing to their notice another plant of the same character—perhaps better known, but scarcely less beautiful, and certainly not less interesting—the *Nelumbium speciosum*.

Our climate is unsuited to the superior production, either by nature or through art, of some things in which our trans-atlantic friends excel; but, on the other hand, it is adapted to the perfection of other highly ornamental objects, which can scarcely be attained by them in any way, and which are calculated to give to American horticulture an envied character peculiarly its own. The *Nelumbium*, as the following account of its success with us shows, is one of these things. Though for sixty years intro-

duced into English collections, it is there comparatively scarce, and retained with great difficulty. Judging from a late number of the *Revue Horticole*, it is a rarity even in the more temperate latitudes of France, as it details the sensation its first flowering created in Paris. To American cultivators it has been hitherto comparatively unknown.

The seeds from which our plants were raised, were procured for Mr. COPE by Mr. EZRA BOWEN, of Philadelphia, while on a voyage to Calcutta last winter. I divided the seed into two sets: those of one I filed through the outer coating at one end, until the fleshy part of the seed was just discernible; the other I sowed just as they were, plunging the pans of seed in water kept from 80° to 90°. The former germinated in about ten days. Soon after they were separately potted, and made a very rapid growth. Early in spring our first experiment with it was made, in a large box plunged in our *Victoria* tank. Your readers will remember that an essential part of our successful treatment of the *Victoria*, lies in obscuring the glass. We soon found that the *Nelumbium* disliked this shade; and so, on the 20th of May, we made a trial of it in the full sun, in a tank out of doors, wherein the *Victoria* had been unsuccessfully tried the year previous. This tank is oval, about fifteen feet long in its widest diameter, and the water in it being about three feet deep, constantly renewed by the waste water from the overflow of our hydraulic reservoir. The water was 65°, in the mud at the bottom of which we planted three very weak plants. For more than a month they made little progress. As the weather grew warmer their growth became rapid in proportion, till by the beginning of July the tank was completely covered by a profusion of fine foliage, some of the leaves reaching two feet in diameter. Soon after this the amphibious (excuse the term) leaves appeared, like so many inverted parasols, rising from two to three feet out of the water; and connected with them appeared the flower buds, rising erect out of the water in the same manner. On the 14th of September the first blossom fully expanded, being a little less than four months from the time the scarcely-rooted plants were planted there. The flowers are less evanescent than the *Victoria*, remaining in perfection several days. They are of a delicate rose color, declining gradually to a white as it approaches the center; while high in the middle rises its inverted cone-like receptacle, with about eighteen stigmas equally distributed over its flat yellow surface. When laid out, the diameter of our flower is about nine inches; but the fragrance which travelers speak of is scarcely perceptible. It will undoubtedly become one of our most popular plants for open air culture. I should not be surprised to find, in a few years, a *Nelumbium* tank an essential in every garden of any pretensions.

The question is yet undecided, whether the roots will be able to withstand the severity of our winters. I have every confidence that they will. The mean temperature of the coldest month in the year in Pekin, where this plant abounds, is, according to Baron HUMBOLDT, 24.62, while that of the latitude in which I write is estimated as high as 32.72. The probability is that the only care requisite will be to place the roots so deep as to be out of the reach of actual frost.

It was a singular coincidence, that on the very day this lovely blossom first opened

with us, the *Espirito Sancto* (*Peristeria elata* of orchidaceous collections), of which the curious resemblance to a dove of its flowers has obtained for it the name of "Holy Spirit" plant by the Spanish, and such a round of paragraphs from the newspapers lately, should also open its really fragrant blossoms—both expanding together, and both the gratefully-acknowledged offerings, within a few months, of enthusiastic friends in distant countries. The bulbs of the latter were the gift of Mrs. TOTTEN, to whom they were transmitted by her distinguished husband, now employed on the Panama railroad.

It may interest you to learn that the original plant of the *Victoria* is as flourishing as ever, the flower opening to-night (September 17th) being the one hundred and thirty-fifth which it has produced.

MANAGEMENT OF PYRAMIDAL TREES.

BY ROBERT MESTON, GARDENER TO COL. A. J. POLK, ASHWOOD. TENN.

IN the August number of the *Horticulturist*, page 337, there is an extract from the *London Gardeners' Chronicle*, by WILLIAM MASON. Mr. MASON complains of the absence of good pyramid pruning in that country (England). Now, sir, the question which arises is this: Are we in advance of our trans-atlantic friends, the British, in that department of horticulture? I think not, and will give you my reasons; but, in justice to the cultivators of pyramid Pears in this country, I must here state that I have never seen any large pyramid Pears in America, my observations being entirely drawn from the sample of young trees that I have secured at different times from Nurseries North and East.* These trees have all had plenty of good clean wood; and had they been headed down, as Mr. MASON recommends, they would have pleased the most fastidious taste in Pear culture. Now, my reasons for supposing that good pyramids are scarce in this country as well as England, arises from the fact that the majority of our trees are not headed down low enough the first year from the bud, as all the trees that have come under my notice have been headed down to eighteen inches and upwards. If pyramid Pears were cut down from ten inches to a foot, we should never see any trees like No. 4, as figured in the June number of the *Horticulturist*, page 255,† for the top of that tree must have been where the spurs are at its base. Every body that knows any thing about working up deep trees, must be aware that if we prune sparingly the first season our trees never can become fully developed at the base, although very high authorities in England as well as in America have recom-

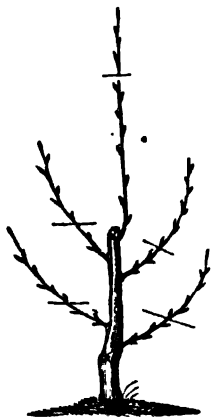
* Nurserymen generally find it to their advantage to have tall trees, as the tallest sell the best. The English Nurserymen seldom attempt to grow pyramidal trees for sale. Some advertise them, but we do not remember to have seen one worthy of the name. Very little is really known yet in England of the management of pyramidal trees; and whatever Mr. THOMPSON teaches has been gathered by him from French practice.—ED.

† Very much depends upon the variety. It would never do to adopt a uniform length or number of buds, as eighteen inches would be as low for some as ten for others. For instance: the *Glout Morceau* throws out side branches with the slightest provocation, whereas the *Louise Bonne* is obstinate.—ED.

mended the leaving of eighteen inches of the first year's wood. Now, if there is any analogy between working up a horizontal tree and a pyramid, why would not the same system of pruning be adapted to the one as well as the other in the first formation of the tree, the object being the same in both, viz., to secure a well-developed base the second year from the bud?

I can not think that any of the advocates of this system of long pruning for pyramids, would recommend the same length of wood in a horizontal tree. For my part, if I was going to head down a tree of one year's growth, to be worked up as a horizontal or a pyramid, I would cut down to about five good buds, leaving the top bud for the perpendicular, while the four remaining ones would form the base; and if for a pyramid, it would be something like the annexed figure. But the objection to this system of pruning might be this: the growth in this country is so great, as compared to the growth in England, that the bottom buds on our trees are abortive;* and by heading down to full and perfect buds, accounts for our long system of pruning. But suppose these trees were headed down as soon as all danger of a second growth was over, would not these buds become fully developed by the spring? This, I am aware, would not suit nurserymen, as most people like to prune their own trees, whether they know how or not. But I think there is no danger even if the lower buds are not as well developed as we could wish, for this reason: I headed down several trees last January that were two years old, without any appearance of good buds; these trees all threw out good strong shoots, and may be formed into handsome pyramids. I think there can be no doubt that a tree may be formed the first year from the bud, similar to the above figure, by keeping the terminal bud pinched out until the base of the tree is formed.† This ought to be done when the shoot reaches about eight or ten inches, but never ought to exceed ten. This is an experiment I have not tried, for the want of young trees; but still I think, by not allowing the shoot to make one straight growth, we stop the superabundant sap which would flow into that part of the tree that is to be cut off—therefore there can be no economy in allowing the tree to grow into one straight shoot the first year, to be cut off and thrown away the next. But if by pinching the first year's bud, as directed above, we get, from four to six good laterals at the base of the tree, I think we shall be saving one year.

The object in growing pyramidal Pears ought to be the beauty of the tree, as well as the goodness of the fruit; but if in the first instance we spare the knife, we spoil



* No difficulty on this point—the lowest buds on a yearling shoot may be forced out by close pruning.—Ed.

† This answers very well with some varieties, such as form lateral buds as the growth proceeds. Many varieties, however, will not throw out side branches by pinching, but merely stop growing for a time, until a good terminal bud is formed, when it pushes; and trees of this kind are much injured by pinching. We have tried this experiment extensively. We are satisfied that, in all cases, it is safer to allow the yearling tree to complete its growth in our climate, and then cut back to the desired point; the buds thus left have great force, and push vigorously. In the South, where a late growth is common, pinching the extremities at a time when the lateral buds are not likely to push, will no doubt aid in ripening the wood and perfecting the buds.—Ed.

the tree. All deep trees ought to be pruned after Mr. THOMSON'S method—that is, the summer pinching—always beginning at the top of the tree first, allowing the under part of the tree to remain ten or twelve days before it is pinched. This check upon the upper part of the tree forces the sap into the lower branches, and keeps the tree uniformly the same from top to bottom.

NEW VARIETIES OF STRAWBERRIES.

BY WM. R. PRINCE, FLUSHING, N. Y.

81. *Globose Scarlet*.—Very large, rounded, beautiful light scarlet, very productive, valuable, plant hardy and very vigorous. P.*

82. *Crimson Aromatic*.—Dark green foliage, fruit very large, rounded or obovate, crimson, sweet, high flavor when full ripe, very productive, estimable. P.

83. *Prince's Climax*.—Monstrous size, splendid bright scarlet, some with and some without a neck, pleasant flavor, a showy and beautiful berry, extra, plant very hardy and vigorous. P.

84. *Coronet Scarlet*.—Very large, rounded, beautiful scarlet, excellent flavor, very valuable, extra. P.

85. *Imperial Crimson*.—Large, short cone or rounded, dark crimson, very sweet and good, firm, keeps long, immense bearer. P.

86. *Prince's Imperial Scarlet*.—Monstrous size, conical, sweet, very fine flavor, productive. P.

87. *Transcendent Scarlet*.—Largest of all, dark scarlet, round, often compressed, sweet and good, productive. P.

88. *Prince's Black Prince*.—Large, conical, very dark crimson, good flavor when full ripe, productive. P. (This and the following are seedlings of the *Black Prince*.)

89. *Aromatic Scarlet*.—Secondary size, conical, dark scarlet, sweet, juicy, very fine, rich flavor, similar to the *Black Prince*, extraordinarily productive. P.

90. *Luscious Scarlet*.—Dark scarlet, large, rounded, first rate flavor, productive. P.

91. *Scarlet Prolific Pine*.—Rather large, conical, bright scarlet, fine flavor. A seedling of *Burr's New Pine*, and an improvement. P.

92. *Saccharine Scarlet*.—Conical, extra sweet flavor, secondary size, productive. P.

93. *Early Prolific Scarlet*.—Conical, with a neck, secondary size, or rather large, beautiful light scarlet, excellent flavor, exceedingly productive.

94. *Diadem*.—Very large and showy, rounded, beautiful light scarlet, pleasant flavor, remarkably fine berry, extra, plant hardy and very robust. P.

95. *Crimson Profuse*.—Resembles *Crimson Cone* in size, color, form, and flavor: slight acidity, profuse clusters, none more productive, secondary size. P.

* P. denotes pistillata. H., hermaphrodites.

96. *Rubicon*.—Very large, obtuse cone, dark scarlet, good flavor, large as *McAvoy's Superior*, and resembles it. P.

97. *Perfumed Scarlet*.—Rather large, rounded, light scarlet, highest flavor of all, productive. P.

98. *Long Scarlet*.—Oblong, with a neck, very fine flavor, productive. P.

99. *Crimson Prolific*.—Conical, crimson, sweet and good flavor, extra productive, tall, vigorous foliage and scapes. P.

100. *Scarlet Magnate*.—Very large, rounded, and some berries compressed, rich flavor, productive, vigorous foliage. P.

ON STYLE AND EXPRESSION IN CERTAIN TREES AND SHRUBS—THEIR ADAPTABILITIES, &c.*

LANDSCAPE gardening in its strict sense has scarcely kept pace with what has been termed the Gardenesque of late years; and why! Simply, I suppose, from the fact that where there is one person who can appreciate the beauties of lines and forms, independent of color, there are a score who can not; but who nevertheless are, it may be, adepts at what is termed "clumping" flowers, and all the paraphernalia of the flower garden.

While, however, England sustains her position in the van of civilization, so long must true landscape gardening be fostered; and it must be confessed that we owe its preservation and encouragement mainly to our aristocracy, who are ever in a better position to appreciate its value than any other class of society.

My purpose is to draw attention to the beauties of form in certain trees and shrubs, old-fashioned kinds or not, and to point to their eligibilities, whether in the park, the ordinary pleasure grounds, or the flower garden. As country seats differ—and indeed should do so—as to their general tone or expression, sometimes through position and adventitious circumstances, and sometimes as a matter of design, it follows that a judicious adaptation of trees and shrubs becomes necessary, whether as accompaniments or as constituting a portion of the chief features of the grounds. In most of the pleasure grounds connected with the seats of our nobility and gentry, certain by-scenes, retreats, nooks, or decorative adjuncts occur, which either possess a kind of individuality, or require it to be created by the skill of the artist. Hence the necessity for a nice perception of the character and ultimate expression of trees and shrubs. The grave and the gay would be terms far too sweeping in their signification to embrace all the objects required in extensive gardens. From the mausoleum to the parterre may exist several intermediate characters, each requiring a separate impress, yet merging into each other. For instance, there may be the rosary, the American ground, the decorated promenade, the terrace, rock-work, &c.; and as matters further from home, walks and adjuncts connected with the margins of the park, the lake, the

* Communicated to the *Journal of the London Horticultural Society*, by ROBERT ERRINGTON, C. M. H. S., gardener to the Duke of Devonshire, &c.

woodlands, the grove. It need scarcely be urged that each of these requires peculiarity of style in the trees and shrubs which are used as accompaniments. There exists, moreover, in addition, a demand for trees and shrubs adapted to the various styles of architecture; and to the vestibule, the corridor, balustrades, arcades, the conservatory, &c.

Thus far I have pointed to a few of the chief objects, in order to show the demand for a variety and choice of materials, and to mark the existence of such, and to claim in some degree for the landscape gardener an immunity from the ordinary bondage imposed by the great goddess Fashion; the genuine landscape gardener caring more for lines and forms than gaudy colors.

Mere novelty and color, then, being set aside for a moment, I would beg to advert to what we may term style and expression in trees and shrubs, and with much deference submit the following, which is capable of amplification:

Forms—ROUND or FLAT-HEADED, generally massive; POINTED or SPIRY; COLUMNAR; FASTIGIATE; HORIZONTAL; WEEPING.

To these common terms, as descriptive of general forms, may be added certain other characters or habits; such as the tinted, or those which impart a solemn grandeur or richness, at the season of fading, in our early autumn or winter months; feathery and light branched trees or shrubs, adapted in a special way to the vista or glade; rock-shrubs and trees, those adapted to the banks of water; climbers, creepers, twiners, berry bearers, and variegations; with the coarser and more rustic-looking things, as leading to or connected with the woodlands, the fields, or the moor.

I will now point to a few trees and shrubs in each of the classes, begging it to be understood that they may be either old or new, their suitability alone being the assumed ground of merit.

Round or Flat-headed Section.—Foremost, “the gnarled and unwedgable Oak”—everybody’s favorite. Here we have one of the finest contributaries to a bold sky outline—in age exhibiting broad and heavy masses of foliage, disposed in well-defined, abrupt, and even angular breaks; added to which a tortuous and rugged bark—a bold relief among trees and shrubs of tamer character. The Beech, too, a tree for the park, the grove, the glade, or the vista. The Sycamore, which, although when young is of no significance, attains a character in age frequently of much consequence to the scenery where it is situate; the foliage in this case running into heavy masses, with deeply indented breaks in the outline. The Scotch Fir in age frequently attains a most picturesque appearance. In this section we have such trees as the Elm, the Lime, and various others.

Pointed or Spiry.—Such as the Lombardy Poplar, the *Taxodium sempervirens*, Douglas Pine, Larch, Silver Fir, and several other conifers, with the beautiful *Cryptomeria*, and many ornamental shrubs. Trees and shrubs of this habit are finely adapted for relieving the monotony of a heavy sky outline. What a charming effect is produced by even a group or two of the Hollyhock, peeping forth from among a heavy mass of flat-headed shrubs! The Lombardy Poplar, too: who has not seen and admired this tree, rising in the distance in conjunction with the steeple of some time-

hallowed church? This is indeed a most important section. If I remember right, Mr. REPTON affirms that spiry trees are well adapted to the Grecian style of architecture.

Columnar.—Here are many admirable things, particularly suitable as accompaniments to buildings. For the margins of promenades, terraces, or indeed any long, straight, and formal walks or lines—the corridor, balustrade, &c.—they are considered well adapted. I need only point to the Irish Yew, Arbor Vitæ, Red Redar, with some of the members of the Juniperus and Cupressus families, as peculiarly of this class.

Fastigate.—There are some singular-looking things in this section; as for instance the upright or Cornish Elm—indeed, some of the conifers may be placed here. There has been some difference of opinion as to the use of the Lombardy Poplar, which is perhaps more of the columnar character; but I think any one going from London to Richmond by water, must be struck with the extraordinary effect produced at some villas on the banks, in the grounds of which the Lombardy Poplar, the Cedar of Lebanon, and the Weeping Willow, may be seen in close combination with buildings of modern style; the whole producing a most striking picture—such forms powerfully contrasting with the beautiful river to complete the scene.

Horizontal.—The ancient Cedar of Lebanon may here be placed foremost: too well known to require description. The Cedrus Africanus will probably stand in this class; and that ponderous and dignified-looking tree, the Araucaria imbricata; the Silver Fir, and indeed several conifers belong here, which altogether is a most important class, especially with reference to architectural lines and forms.

Weeping Kinds.—First, the old Salix Babylonica, or Weeping Willow, which may stand as the type of this class of trees; albeit we have such graceful things as the Cupressus funebris, the Deodar, the Hemlock Spruce, &c.; even the Birch, in some of its best humors, swells the list, which, if space would permit, might be enlarged with many a goodly candidate.

Who would refuse the Deodar and the Weeping Willow a place contiguous to water scenery? The latter is so much at home in such a situation, that an ornamental piece of water in a pleasure ground is scarcely considered complete without it. Here previous associations and individual aptitude combine to press this time-honored tree on the notice of all lovers of the graceful.

Having thus given a hasty sketch of character in trees—a subject which, if done justice to, would fill a book—I may now be permitted to point to a few trees or shrubs, which, although possessing much character, may not fall in strictly with any of the classes here assumed.

Conifers in general: it is almost superfluous to remark that they possess capabilities of giving quite a new tone to British scenery; not that they will by any means cause us to part with our majestic Oaks, our Beeches, &c. On the contrary, they will add power to existing groups of deciduous timber trees, by depth of contrast; and combine, as it were, the freshness of spring with the gloom of winter.

Among these the Deodar seems, by general consent, to occupy the very first place, based upon a double consideration: its exceeding great beauty as a tree, and the well-

known durable character of its timber. Another capital feature belongs to it: the power of its leader to resist frost or cutting winds. No person, on first observing its graceful and delicate-looking leader, growing so late in the autumn, could suppose that it could remain unscathed through a severe winter. It is, moreover, the most manageable Fir I have seen, as to habit; it would be easy to keep it in a dwarf state for many years. It is thus adapted to rock-work, or other rustic affairs, where dependent forms are employed. Next, the regal-looking *Araucaria*—a tree for palaces. *Cryptomeria*, too, and the Douglas Pine; and then the genera *Cephalotaxus*, *Libocedrus*, *Juniperus*, *Taxodium*, *Cupressus*, &c. What a rich group! Any painter who, by anticipation, could produce a landscape on canvas, such as will be obtained in Britain in some twenty or thirty years hence by the use of these fine things, would perhaps give a greater impulse to planting than all the advertising of the tradesmen.

The selection of trees and shrubs possessing autumnal tints is by no means an unimportant part of the planter's business. When the gloom of winter threatens—when the aspect of our gardens becomes totally changed by the general decadence of the floral tribes—then the bounteous hand of Providence, by a gracious compensation, “lights up” the woodland, the grove, and the shrubbery, by those delightfully various and ever-changing tints which all who can appreciate the beauties of the landscape so much admire.

This is a numerous section, and any one who would watch and carefully classify them would do planters a real service. I may just observe, that the most glorious tints I am acquainted with are those of the Liquidamber, the old yellow Azalea, and I am tempted to add, although somewhat out of place, the true West's St. Peter's pine. The Oak family are not poor in these things; the old Merry tree is sometimes beautifully tinted; so is the *Corylus atropurpureus*, the *Hippocastanum*, and a host of others, including pure yellows, as the Tulip tree, &c. To these may be added, for their rich tints, our colored-stemmed shrubs, as some of the Dogwoods. The berried ace may also be glanced at. Foremost, the old Holly, associated in the mind with the Christmas festivities of centuries, and outdoors second to none in the richness of its embellishments, or as shelter, whether in the shrubbery, the field, the park, or the forest. Next, the sombre Yew, with its funereal associations, combining massiveness, durability, and hardihood; the *Arbutus*, *Juniper*, *Leycesteria*, *Snowberry*, *Ivy*, *Mahonia*, *the Garrya*, *Euonymus*, &c.

The variegated section is by no means meagre or inapt for decorative purposes. Materials also for rock-work, or for imparting a wilderness character, undergrowths and climbers; and lastly, as a consideration worthy the close attention of every one engaged in ornamental gardening, our very early spring flowering shrubs or trees, and our very late ones.

Among the former, I would point to the old snowy *Mespilus*, the Almond, *Ribes*, *the Corchorus*, *Chimonanthus*, *Cydonia japonica*, *Mezereon*, *Cornelian Cherry*, *Weigelia*, *Sorbythia*, &c. Among the latter, the old *Althæa frutex*, *Erica herbacea*, *Clethra*, *Arbutus*, *Escallonia*, *Laurustine*; and lastly, the old Glastonbury Thorn—legendary name—and difficult it is to know whether to class this with the old or the new.

Sketchy as the present remarks necessarily are, as applied to a subject having such wide bearings, it may be seen by those unacquainted with our trees and shrubs, how rich England is in materials for decoration, at whatever period of the year, or whatever the style; and I may be allowed to express a hope, that all intent on beautifying their gardens, parks, &c., will take into consideration the propriety of paying a due regard to the habitudes and adaptabilities of trees and shrubs.

FRUIT TREES AND FRUIT OF 1853.

BY WM. BACON, RICHMOND, MASS.

THE autumn of 1852 was beautifully fine for ripening the wood of fruit trees. The season throughout was so dry that the growth of twigs was less, and stopped earlier than usual. The frosts began later in the season, so that the wood had sufficient time to mature and the buds to encase themselves in their sealed cells before the commencement of winter; and winter, as if tired of vexing the patience by severe and pinching cold alternated by thaws, preserved an even and agreeable temperature—gave no very cold and but few thawy days. Spring had none of the fantastic tricks of freezing and thawing in which she is so apt to play off her flirtations, to the annoyance and injury of the cultivator. All these things were very favorable, so that in due time the trees put forth their leaves and blossoms to the extremities of their healthful branches. Consequences were as follows:

Gooseberries, currants, raspberries, &c., gave abundant crops. The former gave less show of mildew than is usual, and we have no doubt but with proper precautions the evil may be overcome, so that the better varieties, which are really delicious, will be more generally cultivated.

Cherries came on in their season—a good crop. There is not, in Berkshire, one tree where there should be one hundred; so that the supply was limited to individuals. It is a tree of easy culture in our soil, and hardy in our climate; and the only cause why they are not raised in abundance, must be owing to the indifference of the people.

The Peach tree has exhibited desirable indications of health and thrift. Every tree we saw was heavily laden with fruit—some with that of the most delicious quality; and if all were not productive of good, it was owing to negligence or indifference of the cultivators. The productions of this fruit the present year will give a new impulse to its cultivation; and we have no doubt but Berkshire—indeed, the whole country between the Hudson and Connecticut rivers—will yet produce an abundant supply of peaches of the first water for its population.

Grapes have succeeded admirably the last season, wherever they have been aided by the hand of cultivation or have found a straggling matted vine to grow upon. The difference in quality and maturity between those furnished by the care and no care process, is decidedly in favor of the former, and should stimulate all to a little extra exertion to provide themselves with *the best* of this delicious and healthy fruit.

Plums have succeeded according to locality. In some places the trees are nearly destroyed by the black bunches on the branches; and in such localities the crop has failed. But in favorable localities the crop has been abundant even of the more delicate varieties.

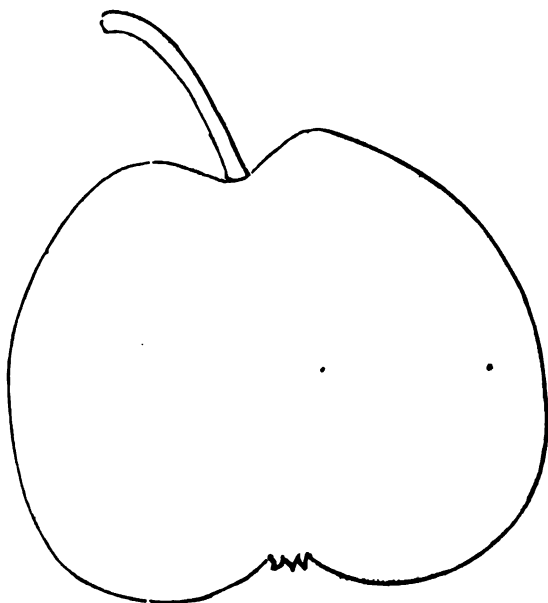
Pears have done well, and those who have been most faithless are beginning to open their eyes (and labor with their hands) to the culture of the better kinds, all which, with proper care, are admirably at home in this region.

The apple crop is short, which may be attributed mainly to the fact that reliance is yet placed, to an extent, on old and ill-cultivated trees which have had their day and served two or three generations, who have rewarded them by injudicious pruning and miserable culture until their day and strength is past, and they ask to be let alone to die and have their places supplied by new orchards, more kind care to which will provoke greater fruitfulness, and give strength to live out a more vigorous and extreme old age.

TWO FINE FOREIGN PEARS.

THE BEURRE GOUBAULT.—This variety originated at Angers, France, and has been sent out from the nurseries of M. Le Roy and others there. It has already been con-

siderably disseminated in this country, and as far as we know it stands well. It is one of the most vigorous and beautiful trees, and one of the most productive we know of, among the hundreds of varieties we now cultivate. The texture of the fruit is like that of the *Summer Francreal*—soft, juicy, and refreshing—not having the buttery character of a *Doyenne*. The color and spotting of the wood also resembles the *Summer Francreal*, but it is much more vigorous and rapid in growth. It even outgrows the *Duchesse d'Angoulême* on the Quince, takes the pyra-



BEURRE GOUBAULT PEAR.

midal form easily, and while growing freely bears profusely. The misfortune about it is the season of its maturity among peaches; yet such a fruit is never unwelcome.

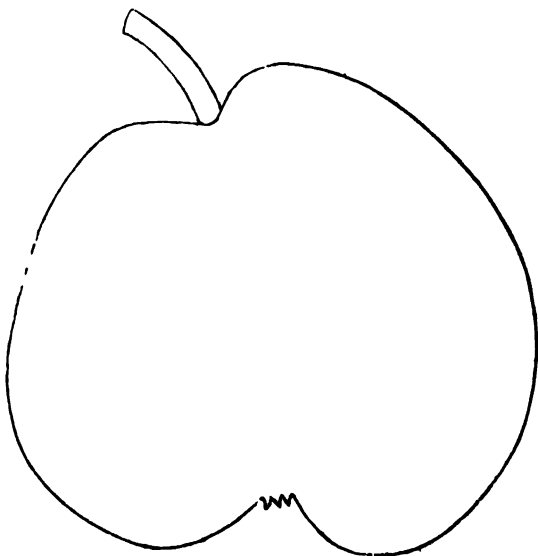
Fruit—round, tapering slightly to the stalk, very smooth, regular, and uniform.

Skin—greenish-yellow at maturity, sprinkled with green dots. Stalk—long, an inch or more, set in a narrow depression. Calyx—open, large, in a smooth shallow basin. Flesh—white, very juicy, melting, sweet, refreshing, and pleasant. Should be gathered early, and ripened in the house. It ripens with us from the last of August to the middle of September, immediately preceding the *Bartlett*.

Taking into account the extraordinary vigor, beauty, and productiveness of the tree, and the good quality of the fruit, we must regard this as a very valuable acquisition.

THE BEURRE DE KONING.—We received scions of this variety some five or six years ago, from M. BAVAY, of Vilvorde, Belgium, who recommended it as one of the most promising new varieties. We believe it was originated by VAN MONS. It has fruited with us three years, and has been invariably very good. It resembles the *White Doyenne* in appearance, texture, and flavor. The tree is a vigorous grower, both on Pear and Quince stocks, and bears young and abundantly. We consider it as likely to prove a valuable variety.

Fruit—medium to large size, roundish, flattened at the crown. Stalk—about three-fourths of an inch long, inserted obliquely in a slight depression. Calyx—pretty large, open, and set in a narrow, deep basin. Skin—yellow, frequently tinged with red on the sunny side, sprinkled with russet dots quite thickly about the calyx and stalk. Flesh—fine, melting, buttery, sweet, with a rich and pleasant flavor. Season—Oct.



BEURRE DE KONING PEAR.



Foreign Notices.

ARBORS.—Arbors, covered walks, and shaded resting-places, come within the limits of picturesque grounds, if they are formed of living trees or shrubs. On the Continent, the vine is much used for this purpose; and so it may, to a certain extent, in the south of England; but beyond the

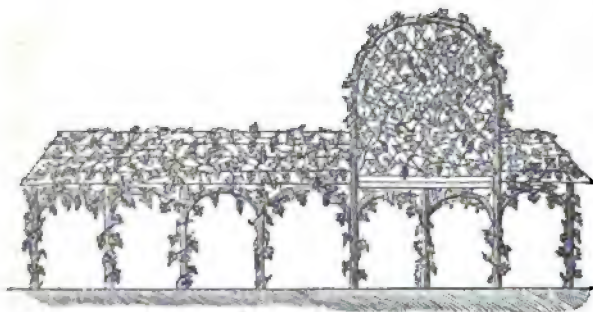


Fig. 1.

midland counties, and in Scotland, the Hop, Clematis, Ivy, Honeysuckle, and Climbing Roses, must be used as substitutes. Fig. 1 displays the taste of the French and Germans in this matter, who in general place them against walls, and often carry them by a flight of steps to a considerable height, as in our figure.

In Germany, arbors are often fitted up among the branches of very large and old trees, and access got to them by means of a ladder. If study or privacy induce the visitor to ascend, the ladder can be drawn up, and so intrusion be prevented. We may here remark, that in general the terms arbor and bower have been considered synonymous: it appears that properly they are not. Mr. MALLETT, of Dublin, frequently quoted in this work, says: "An arbor is a space covered and enclosed by the interweaving branches of trees, and reticulated stems of living plants, intended to afford shade and retirement. The words arbor and bower are properly very distinct; the former alone being formed of the living branches and stems of trees, whereas the bower, which is not derived from *bough*, or any analogous word, means simply any small chamber; yet they are used indiscriminately by the best writers."

The term bower seems, as it were, the word of poetry, in which it is frequently made use of; whereas arbor seldom is, if ever.

With us, few natural arbors are to be met with. The least artistical as those formed by slightly arranging the pendant branches of the Weeping Ash, or similar-growing trees. A few props within, to support a rod or hoop, to carry up the pendant branches, is all that is required; and if these have too much the appearance of art, the smaller branches of the tree may be trained down upon them, or ivy may be planted and trained over them, and allowed to intermingle with the branches forming the roof.

The next kind of arbor for simplicity of form, is that formed of tall, straight, young trees, of



Fig. 2.

Beech, Hornbeam, Mountain Ash, Willow, &c. These planted close together in a line, forming the back and sides of the purposed arbor, the front being in general left open, are bent over at the tops to form the roof, and tied together to keep them in their proper places. Sometimes the stems are crossed in trellis fashion, and after a time they unite by a species of natural engrafting, and become exceedingly strong, and will last for years.

Fig. 2 represents a Gothic rustic arbor, or resting-place; the basement to be of stone, the superstructure of unbarked timber, and the roof thatched with heath. The floor should be pitched with pebbles in Gothic pattern, and the seats be made of oak plank.

AMERICAN GRAPES FOR EUROPEAN VINEYARDS.—It would not be at all surprising if our American grapes, so utterly despised heretofore in Europe, should soon be planted extensively there in vineyards, as it seems they are not attacked by the mildew, which is threatening the European varieties with complete destruction. This would create a singular and unexpected revolution in vine growing. We copy the following article from the *Gardeners' Chronicle*:

It is difficult even for those who witnessed the desolation caused by the prevalence of the potato-murrain, in 1845, to conceive the utter despair which has seized almost all the vine districts, from the Rhine to Madeira, in consequence of the increasing present failure of the vintage, and the prospect of entire destruction which threatens many of the most valuable vineyards. Not only do the grapes decay long before maturity, but plant after plant is dying, in spite of every effort to ward off the mortality. At the present moment, more especially the rich districts of Portugal, on the banks of the Douro and the Upper and Lower Corgo, which supply to so great an extent the London markets, are following the fate of Madeira, and both merchants and laborers are too sensibly alive to the ruin which awaits them; unless some remedy or providential alleviation be found. Happily, however, the principals are not inactive, but are seeking for every information which may give the slightest hope of relief. We have before us a very sensible pamphlet by Mr. QUARLES HARRIS, addressed to gentlemen in the wine trade,* and we have just received a collection of diseased grapes and leaves, forwarded (with laudable zeal, for when sent there was a temporary alleviation of the malady,) from the Upper and Lower Corgo by Mr. GASSIOT, of the firm of MARTINEZ, GASSIOT & Co., of Mark Lane. These present the appearances which have been so often described. The leaves and fruit are covered with *Oidium*, and as in the Madeira specimens, there is an abundant admixture, not only of *Tricthecium roseum*, which is common everywhere, but of a charming species of *Coniosporium*, which has occurred before only on the diseased produce from Madeira. The disease was indeed quite as virulent as in the worst English specimens, and the shoots, instead of presenting a clear healthy brown, were partially or entirely black, an unfailing indication, unhappily, of unhealthy shoots the ensuing year. The grapes are in every stage of disease from simple depauperation to downright corruption.

Though the method employed by M. GISSON is so efficacious when practised on a small scale, it requires too much capital for the poorer cultivators of Portugal; and the total amputation recommended by some authors is hope so long delayed as to make the heart of the needy vine-dresser sick indeed. Mr. ROBERT THOMPSON, however, to whom we are indebted for much of the accompanying information, writes as follows: "Bleeding the vine, by cutting its roots, has been recommended, and instances have been adduced to prove the efficacy of this mode of treatment; but the vine has such power of developing shoots and leaves that I can not imagine how plethora could take place. Beside, we find weakly plants are as liable to the disease as those of full habit. It may, therefore, be concluded that the beneficial result of root-pruning depends on something else. It does away with tap-roots that perhaps were worse than useless from being in a dry subsoil, and which, from being the principal feeders, have not afforded an adequate supply to the vessels connected with them. I had some Apricot trees so attacked year after year with mildew that not

* Remarks and Observations on the Vine Disease now Ravaging the Wine Countries of Europe, with Recipes for its Cure, and Microscopic Examinations, executed by TUFFEN WEST, Esq., 54 Hatton Garden. SMITH & WILDER, 1858, p. 10, table 1.

one fresh healthy green leaf could be found. They were taken up carefully in autumn, and the border was well trenched. The trees were then replanted, and afterward bore a healthy foliage. The same may hold good as regards the vine."

It appears, moreover, that the American varieties or species, when introduced into Europe, are very slightly if at all subject to be attacked; and on the contrary, the European varieties, when cultivated in the Northern States, at least of America, are so subject to mildew that no one will persist in their cultivation on a large scale, though in conservatories the sulphur system has been adopted, it is said, for years before the disease became generally known in Europe. The Americans have had cultivators from the wine countries on the Rhine and elsewhere, who have carried with them their own varieties, concluding from the soil and climate that they should make a fortune. But in three years all their plants were swept off by the mildew.

The attention, therefore, of the more opulent vine growers should be especially directed to the superior varieties of American grapes, especially such as are not of a foxy flavor, and the sooner such varieties are procured the better. Orders should be immediately transmitted through safe and judicious hands, for cuttings, or what would be better still, some intelligent practical men should themselves at once proceed to America to obtain them from the source most free from suspicion, or at least procure the best which at present exist in Europe. It is true that some years must elapse before any general benefit could be derived, but if this plan holds forth no hope, there is at present little reliance on any other. It is true that the American kinds are by no means equal to the European, and less calculated for wine, as it should seem from the small product of the American vintage; but a judicious selection might be expected in good hands not to be valueless.

We have in vain inquired after the vine mildew in the Southern States, though we have seen an imperfect specimen which had a very suspicious appearance. Unfortunately, among some fifteen hundred authentic specimens of the fungi of the United States described by SCHWENKE, which we have lately received, there is not any specimen of *Erysiphe necator*, which is sometimes so destructive to the fruit.

It is curious that the grape mildew should have found its way to America from England, whereas there is some reason to believe MORREN's notion that the *Botrytis infestans* of the potato-murrain traveled into Europe from America. M. J. B.

CULTURE OF THE VINE.—It is generally considered that little which is new can now be advanced on this subject. My desultory remarks may therefore appear to be superfluous; but I would ask to what causes are we to attribute the different results which are constantly being obtained by men of great skill and experience in their profession? That there are differences in their productions every one will admit who has an opportunity of examining the grapes exhibited at the Chiswick shows. There we find large bunches with berries gorged with watery matter, but without bloom; there are also large and splendid bunches apparently well ripened but deficient in color; and we often, too, find these beautiful bunches cut fully three weeks before their maturity. Grapes are not ripe because they are black or transparent, as the case may be. The formation of saccharine matter is the last process toward ripeness, which ought to be fully accomplished before grapes are cut and sent to any table. A celebrated grape grower, a quarter of a century ago, used to boast that his bunches were of medium size, and so compact that they retained their form in whatever position they were placed. The berries were large and had a bloom like the Sloe; the flesh was firm, juicy, and rich in sugar, and the berries retained the stamens of the blossom around their base. This he said was growing the *Hamburg* grape in perfection; but if that be so, how rarely do we see it attained! To what cause, then, are we to attribute these different results? The most successful growers in one locality when removed to another have often not been more successful than their brethren of less reputation. One attributes his success to the formation of his vine border; another to his system of pruning, while a third would persuade us that it consists in careful attention to the routine of management in the interior of the house. Now I admit that these are important considerations in the culture of the vine in this country; but when these are combined, do we always obtain successful results? My experience leads me to say, No.

Gardeners in general can not be expected to have a chemical knowledge of the constituents of soil adapted to the growth of the vine and consequent maturity of the fruit; but in all parts of the country, wherever a mansion is erected, and gardens connected therewith for the growth of fruits, &c., the vine will generally be found; and I need hardly remark that in those situations only where the soil is naturally adapted for its growth, and where skill and the practical routine of management are carefully applied, will the results be lasting or satisfactory. The vine, it has been said, is a gross feeder, and well has its voracious appetite been supplied. Deep borders have been made for it and crammed with rich incongruous matter, foetid and disgusting; but what effect, after a few years' decomposition and consolidation, this unseemly compost has on its health and productiveness, the advocates of the system can best report. That the vine requires a liberal and generous supply of nutritive food is certain; but the proper time to apply it is when the plant is in active growth. It is currently believed that the great vine at Hampton Court derives its nourishment from a sewer in its neighborhood; but whether this is the case or not it is evident that its roots have an unfailing supply of healthy and invigorating food. It is asserted, on the contrary, that the large vine at Cumberland Lodge has no such source of supply; but that it derives its nourishment from the natural fertility of the soil. Some years ago I was in the habit of visiting the gardens of a gentleman in whose green-house (which was of no ordinary size) was planted a *Black Hamburgh* or *Frankendale* vine, which entirely covered the house. Having expressed my surprise to my friend at the fine crop it yearly produced, well knowing that the subsoil was a strong clay, and that no extra supply of nourishment was given to the surface, he said that from his stable-yard there passed within twenty feet of the front of the house a drain which he thought the roots of the vine had entered, and which he considered was the cause of its productiveness.

Some years ago I gave a vine to a neighbor who planted it at the south front of his dwelling-house. I can answer for it, there was no preparation of soil in this case—in fact, it had many years before been paved with flints; some of these were taken up, a hole made, the vine put in with a little fresh soil around the roots, and the flints replaced. The plant grew to the admiration of its possessor, and in four or five years it had filled the whole of the space available for it, producing abundant crops, and many of the branches were of such a size as would have done credit to any vine. Having my attention particularly directed to its luxuriant growth and fertility, I could discern no other apparent cause than that there had been a cesspool within twelve feet of where it was planted, but which had many years ago been filled up.

I admit that in these two cases I can only draw an inference, as I had no positive proof that the roots had entered the one or the other. I will only notice another instance, which, although not confined to the vine, will serve to show that the latter will flourish exceedingly when its roots are immersed in an intermitting flow of water.

I was solicited by our village schoolmaster to supply him with a vine to plant on the west front of his school-house. I gave him one, more with a view to his amusement than with any hope of successful culture. The soil was very stiff; at ten inches deep it was a strong clay. However, the vine was planted and carefully attended to; the first two years it made little progress, but after the fourth year it grew vigorously. My judgment was called in question—there could be no gainsaying the fact; it was producing shoots from fifteen to twenty feet in length, and a good crop of fruit; but I was not long in suspense—the cause of its rapid growth was soon discovered. The drain from the sink in the wash-house ceased to flow; the vine had been planted within five feet of it; the roots had entered the drain, and entirely filled it up. They were removed, and the hopes of the schoolmaster were blighted.

We have abundant and sufficient proof that the vine will grow strongly, and ripen its wood thoroughly, and produce fruit plentifully, when it is supplied with proper nutriment in a liquid state. I have propagated vines from eyes, and placed them in pots containing about a peck of soil; they have produced rods in the same season from twelve to eighteen feet in length; they bore the following season in the same soil an abundant crop. The health of the vine, then, is promoted and sustained by a free passage of liquids in contact with the roots. I have frequently observed the facility with which it extends its roots along brickwork, or other rough, gritty material.

Were I about to make a vine-border in a situation not naturally adapted for the vine, I would proceed as follows: It should be fifteen feet wide; the soil should be removed to the depth of eighteen inches in front of the house, with a gentle slope outward until the depth was thirty inches at the outside of the border, where a drain three and a half feet deep by two feet wide should run the whole length of the border, the bottom having a gradual fall to a well at the lower end four feet in diameter and three feet deeper than the drain, the upper end to have an opening level with the soil of the border. The drain should be of brickwork, and covered with loose tiles or oak-slabs, that could be easily removed to furnish means of examining the state of the drain when occasion might require. The side of the drain next the border should be pigeon-holed to admit the roots when they shall have extended across the border. The use of the drain is to supply the roots with liquid manure slowly flowing along the bottom into the well, which should be occasionally emptied, and the contents again applied at the upper end. The liquid should only be applied when the vines were in active growth, and if possible at such a temperature as was best conducive to their healthy growth: it should be entirely withheld when the grapes begin to color. To each plant I would allow a separate compartment. If a vine was to be planted under each rafter of the house, then at the center of each light a rough brick-on-edge wall should be built across the border to the drain. In the bottom of each compartment I would have a layer of stones or brickbats, or other rough material, from eight to ten inches deep; on this I would lay the soil two feet deep, which should have been well prepared many months before.

The soil which I recommend as well adapted for the growth of the vine is one-fourth part light turfy loam, one-fourth well decomposed rich farm-yard manure, one-fourth leaf mold, one-eighth river sand, and one-eighth old lime mortar—all being well mixed and thoroughly incorporated by means of frequent turnings. I prefer propagating the vine from eyes taken from healthy, fruitful plants. I can then depend upon the sorts I plant, and thus avoid, when they begin to bear, the too frequent annoyance of finding that one sort has been planted for another. Having obtained in this way good strong one year old plants, I would plant them about the beginning of March; the soil should be carefully removed from the roots, except such as may adhere to the small fibres; the larger roots should be regularly spread out, and the longest cut back; the roots should be laid upon and covered with light, rich, sandy soil, to promote the growth of young fibres. And here I would observe that the front wall of the house should be built on arches, through which the plants may be brought into the house. The length to which the vine may be cut back will be considered its future stem; but this will entirely depend upon the construction of the house, as only one eye should be allowed to push to produce the future fruitful rod.

Suppose we have been enabled to raise our own plants, and have a greater number than is required for planting, the overplus should be brought into the house, with a view to have good grapes the first season. As vines can be successfully grown in pots, I shall here relate my mode of practice. About the first of January the eye is cut with an inch of wood above and below it, and put in a small pot, commonly called a 60 or 8-inch pot; the soil most suitable for it is good leaf-mold and sand. When all are prepared, they are placed in a hot-bed or Cucumber frame; the eyes will soon burst into leaf, after which young roots will be protruded, and the lengthening of the shoot will soon follow. To encourage their growth they should be shifted into 8-inch pots. The soil may now be that previously recommended; they remain in these pots until they have grown from eighteen inches to two feet in length, and then they should be finally shifted into 16-inch pots. When shifted, the plants should be placed so low in the pot that it may not be more than two-thirds filled with soil. The necessity of ample drainage need not be insisted on; the best place to grow these vines is in a pit sufficiently wide for the extension of the rod, and heated by hot water pipes, over which the pots should be placed within a foot of their surface. The mild heat from the pipes will excite the roots, and cause strong and healthy growths, which should be trained not nearer to the glass than two feet. Great care should be taken that, on all favorable occasions, a due circulation of air is kept up, so that strong short-jointed rods, with plump, well developed buds may be produced. They should be duly supplied with water and once a week with clear liquid manure, at a temperature the same as that in which the roots are placed. When sufficient length of wood has ripened, the water may be gradually withheld as soon as the foliage gives indication that maturity is accomplished, the pots may be removed to a south

wall to be laid on their sides, and the rods nailed to the wall the pots being kept dry by covering them with any suitable material. About a month before they are taken in to force, the early formed buds on the rods are removed to the length of five or six feet from the pot; the rod is then coiled down upon the soil in the pot, and secured with strong pegs. The length of the rods on which the bearing buds are left may be from six to eight feet, but I would not advise more than five or six bunches to be grown on one vine. The pot will now be filled up with the compost. It is a good practice to paint the rods annually before forcing, with a composition of clay, lime, and soot, to which may be added a large portion of sulphur, the effluvia of which tends greatly to prevent the attacks of red spider and thrips.

Having now planted the vines in the border, and brought the pots into the house to be placed in the most suitable situations according to the structure, I will proceed to take a review of the interior management. And here I would observe that to grow the grape in perfection, vines alone should occupy the house; we thus get rid of mealy bug and other pests, and the consequent remedies so injurious in their application. I am well aware that the requirements of a large establishment are such that every available space must be occupied. The gardener, ambitious to excel in early produce, is stimulated to grow many things in vineries which ought never to enter them. It is true, many things may be cultivated there with impunity, but the chances are that the vines will suffer. The grapes will not be presented at table in that perfection to which they are capable of attaining, and the gardener will be deprived of at least self-approval. It would be well if employers of gardeners would act on the maxim—a "place for everything, and everything in its place,"—and let the vine flourish alone in the vinery.

As before observed, the rods should be trained two feet from the glass. This will give room for the foot-stalk and full development of the leaf, and in future seasons will give freedom to the fruit-bearing shoots, and prevent their separation from the older wood, an evil to which they are so liable while in a young and tender state. As leaves are so important in the economy of the vine, every care should be taken that they maintain their natural position. There should be no crowding; let every one of them have full exposure to the light. It is delightful to a gardener to survey the full developed foliage like a green velvet sheet, within one foot of the glass, and noble bunches of grapes below, progressing toward maturity. When the young wood has grown from two to three feet in length, it is well to see it thickly studded with small transparent globules, indicating a healthy action of the roots. They show that the latter are absorbing food from the soil and transmitting it to the young stem to undergo the changes necessary for the formation of wood, &c., the leaves as yet not being sufficiently large for this purpose.

It is essentially necessary that a circulation of fresh air be kept up both by night and day; to this end I would strongly recommend that holes about nine inches square should be made along the front and ends of the house, as near the ground as may be convenient, in which wooden frames should be placed; the inside of the opening to be covered with fine wire netting, or perforated zinc, the outside being furnished with a trap-door to regulate the admission of air; similar provision should also be made along the top of the back wall, in order that the temperature may be regulated with perfect safety to the health of the plants. My experience teaches me that vines receive more injury from neglect of proper ventilation than is generally suspected; the injurious effects of want of air are frequently attributed to other causes.

I am no advocate for the application of water with the syringe to the vine. I have for many years discontinued its use, unless plants subject to insects are growing beneath them; then it is freely applied to the plants, but never to the foliage and fruit of the vine. A sufficient moist atmosphere can easily be maintained by the use of evaporating pans, and sprinkling the paths and bottom of the house with water.

Suppose the vines to have grown satisfactorily the first season, and to have produced well-ripened wood, when pruned, the rods should be left from four to six feet long. The house may be shut up about the first of the following February; two or three bunches may be left on each vine this season, but the primary object should be to have the plants well established, abundantly rooted, and wood thoroughly ripened, before a crop is taken from it. The third season the rods should be left as long as the width of the house will allow. They will show abundance of fruit, but here lies the danger; the vines are yet young—an over crop would injure them—therefore

proceed cautiously, removing the bunches judiciously, so that a moderate crop may be left regularly over the house. The good effects of this practice will be evident in due time.

When in bloom it is desirable to give the rods a smart tap two or three times a day, to cause a dispersion of the fertilizing powder; some of the sorts that are shy in setting may have the farina of more fruitful varieties shaken over them; bunches of which may be left to out for this purpose. When the berries are the size of peas, no time should be lost in thinning them; this is a tedious process, requiring skill in the performer, who should have a previous knowledge of the size of berry each variety is capable of producing. Great care should be taken that the bunches do not come in contact with the hand or any part of the operator's dress, so as to cause abrasion of the tender skin of the berries and disfigurement of the bunch. When the stoning process commences, the berries will apparently cease to grow, and little progress will be made, but no means should be used to hasten the stoning; on the contrary, a steady moderate temperature should be maintained until it is accomplished. When the fruit begins to color, a gradual withdrawal of moisture should take place, the same temperature may be continued, but a more abundant supply of air should be given; this is very important, for on a due circulation of air will depend the color and bloom of the fruit. The color of the peach and the apple depends upon a full exposure to the rays of light; not so with that of the grape, which elaborates the coloring matter more intensely under the shade of the foliage. The temperature of the house should vary from 55° to 65° by night, and from 70° to 85° by day, according to the state of the external temperature, avoiding all violent transitions, which can hardly occur if due attention is paid to what is so particularly insisted on, a due circulation of air.—*Tassel, in London Gardeners' Chronicle.*



Editor's Table.

POMOLOGICAL CONVERSATIONS.—During the State Fair at Saratoga, a small party of gentlemen particularly interested in pomology, spent a portion of their evenings in an informal or conversational discussion of some interesting topics. We are indebted to the *Country Gentleman* for the report.

FIRST EVENING.—*Cracking of the Pear*.—The subject of the cracking of the pear was introduced, and a number of gentlemen present were unanimous in stating that in New England and in other places where the cracking had generally destroyed the *White Doyenné*, (or *Virgalieu*,) this variety had entirely escaped when propagated on the quince. The only exception was mentioned by A. SAUL, of Newburgh, where it is usually quite fair, but during the present season of extraordinary rains, it had cracked badly, and alike on both quince and pear. E. W. LEAVENWORTH, of Syracuse, said that of the thousands of bearing trees of that place, none had ever cracked except those brought from Long Island; hence the inference that the disease was mainly from a constitutional condition of the stock or variety—most others, however, inclined to the opinion that this disaster results from a peculiarity of the season. The present year it had been more prevalent than usual; A. SAUL stated that all his *early* pears were fine, and the late ones much injured; the first part of the season being favorable, and the latter excessively wet. Cases were mentioned, however, where the influence of soil had contributed to the same result, in trees dissimilarly affected in the same immediate neighborhood, subjected alike to every peculiarity of the season.

The only instance known where the *Seckel* had ever cracked, was stated by E. W. LEAVENWORTH, whose trees had in one instance borne badly cracked fruit. Every alternate row in his *Seckel* orchard had been heavily manured in the spring, the others remaining unmanured, but all were affected alike.

Several expressed the opinion that the *Van Mons Leon le Clerc* had of late years been less affected with cracking than formerly, and that the over-estimate at first placed upon it had induced many to place it too low. Some were of opinion that it very nearly approached "best," while others considered it as only worthy to be classed with "good," according to the scale of the American Pomological Congress.

The opinion was expressed by a number present, that the cracking of fruit results from the same cause that produces leaf-blight on the tree; and several instances were mentioned where the cracking had commenced first on the lower parts of the tree, where the leaves had been correspondingly attacked.

Select lists.—It was proposed that such gentlemen present as were familiar with the best varieties of the pear, should furnish a list of the three best, or such as they would plant the most largely for their own use. The *Seckel*, *Bartlett*, and *Virgalieu*, (or *Doyenné*,) were selected by P. BARRY, of Rochester; E. W. LEAVENWORTH, of Syracuse; and T. O. MAXWELL, of Geneva. J. J. THOMAS, of Macedon, named *Flemish Beauty*, *Seckel*, *Virgalieu*; J. BATTY, of Clinton county, preferred *Louise Bonne de Jersey*, *Flemish Beauty*, and *Winkfield*. Dr. WENDELL, of Albany, and A. SAUL, of Newburgh, would choose

Seckel and *Bartlett*, and would add the *Virgalieu*, (or *Doyenne*), provided it should still continue to do as well as in years past. It thus appears, that of the seven votes given, six were for the *Seckel*, six for the *Virgalieu*, five for the *Bartlett*, two for the *Flemish Beauty*, and one for the *Winkfield*.

The smallness of size having been stated as an objection to the *Seckel*, one gentleman remarked that a tree on his grounds, which had been uncultivated, had borne such small fruit as is usually seen; the present year it had been well tilled, (without much manure,) with an increase in the size of the crop, and a three-fold increase in the size of the fruit—many of the specimens being quite as large as an ordinary *Virgalieu*. The opinion was given by several that the *Seckel* had not been allowed a fair chance in ordinary management, and that with high culture its fruit would be much heavier and finer.

Fire Blight.—E. W. LEAVENWORTH had found the fast growing sorts of the pear, and those stimulated with high manuring, much more liable to blight than those with short, compact wood; and that the disaster usually occurred during the prevalence of the hottest weather; which was in accordance with the observations of several others.

SECOND EVENING.—*Cracking of the Pear*.—Some additional remarks were made on this subject by Dr. WARD, of New Jersey, adverse to the opinion that the cracking was caused by the removal of leaves by leaf-blight. On his grounds the *Van Mons Leon le Clerc* tree grew with great vigor, but the fruit cracked badly—the present season the cracks were nearly large enough to place one's finger within them, yet up to the present time the tree retains its foliage. His *Virgalieu* trees worked on quince, which last year had given promise of doing well, had cracked badly the present season—the soil in which they grow is regarded as one of the best for the pear, and these trees grow vigorously. T. O. MAXWELL, of Geneva, had pears of the *Virgalieu* grown on quince considerably affected, while those growing on pear stocks were entirely free.

Profits of Fruit Culture.—This subject being introduced, some statements were made of the large profits derived from the culture of the *Lady Apple*. W. H. DENNING, of Dutchess county, had annually sold forty dollars worth of fruit from a single tree, the price varying from eight to twelve dollars per bushel. The soil was gravelly. On soils of a different character the crop had been quite unsuccessful. One gentleman had picked ten barrels from his trees, and found only two barrels fair, the least blemish entirely spoiling the sale of a fancy fruit. Another gentleman stated that from an orchard in Orange county, out of five barrels he had not obtained a single hatful of good specimens. Dr. WARD said that in New Jersey it succeeded well on gravelly loam, which was generally admitted to be its best soil. Information was given of the large profits of an orchard at Darley, near Philadelphia, containing 200 trees, and occupying four acres of land. The average annual nett profit was \$800, or \$200 per acre. The soil of the orchard is constantly cultivated in crops, with the application of bone dust, and it is regarded as one of the neatest and best specimens of orchard culture in the State.

The high price of this apple depends entirely on the demand for it in cities for fashionable evening parties, which is far greater than the supply. American grown *Lady Apples* also command a very high price for the same object in London. The opinion was however expressed, that as it is not a fruit of the highest character and value, and the fashion may not always continue in its favor, it would be unsafe to plant it largely, or exclusively for market.

Profits of Pear Culture.—It was stated by a gentleman present that MARTIN SMITH, of Tarrytown, had sold \$600 worth of *Virgalieu* pears (at \$4 per bushel,) from less than an

acre, beside nearly \$100 worth of *Bartletts*. Another instance was mentioned where an old tree, growing in Western New York, had annually yielded from \$20 to \$30 worth of pears, at two and a half dollars per bushel. An acre would admit 100 such trees, and would yield annually from \$2000 to \$3000 in fruit. The tree mentioned received no cultivation. Dr. WARD had obtained from forty trees of the *Bartlett*, which had been planted only seven years, and which had commenced bearing three years afterward, an average of half a bushel per tree the present season, and had sold them from four to six dollars per bushel. T. C. MAXWELL had trees of the *Flemish Beauty* seven years planted, and two years old when set out, which had borne two bushels each last year, and over one bushel this.

Ripening and Marketing Fruit.—All present who had tried the *Flemish Beauty*, had found it (in common with many other sorts), greatly improved in flavor by picking a few days before maturity, and ripening within doors. This treatment had also been found necessary by some on account of the liability of this pear to be blown off by the wind. P. BARRY said that the treatment must be adapted to the peculiarities of the different sorts—that some pears of a soft, melting character, such, for instance, as the *Flemish Beauty* and *Belle Lucrative*, should be ripened in a cool room, or dry cellar, to prevent the process from being too rapid, and to avoid speedy decay. On the other hand, those of a hardier or more gritty nature, needed a much warmer temperature. The observations of others corroborated this statement. A dark drawer had been found the best place for a pear to complete its ripening, and to acquire its finest color. Whatever the temperature might be, that is best adapted to the maturing process, preserving a *uniformity*, and avoiding changes, was regarded of great importance; and also that too dry atmosphere was unfavorable to the ripening of winter pears especially, which had to remain exposed to it a long time, and which, if they once became too dry, never could be made to soften by maturity. ●

Dr. WARD had found the profits of market pears to depend greatly upon their proper ripening; it not unfrequently happened that a triple price was obtained for handsomely matured *Bartletts* over those equally well grown, but in a green condition. He had sold them for six dollars per bushel, side by side with those equally as fine in every other respect, that would scarcely bring two dollars, and which had not the tempting exterior of full maturity. He had also found *selection* a matter of considerable importance, and had obtained as much for the finest assorted *Bartletts*, taken from a large quantity, as he could have obtained for nearly the whole unassorted. The best *Bartletts* had sold at retail in New York city at twelve to twenty-five cents each.

The *Seckel* pear, although of such superlative high flavor, was very low-priced in market, although instances were mentioned where six to eight dollars per bushel had been obtained for finely grown specimens in the Boston market.

Winter Pears.—Gentlemen present being called upon to name the best winter pears, P. BARRY expressed his preference for the *Lawrence*, *Winter Nelis*, and *Easter Beurré*. The *Lawrence* and *Winter Nelis* would ripen well in boxes in cellars, and the *Easter Beurré* was unquestionably the best very late keeper, but should always be grown upon the quince. J. BATTY, of Clinton county, named two, the *Winkfield* and *Winter Nelis*; J. J. THOMAS selected the *Winkfield*, *Lawrence*, *Winter Nelis*, and *Easter Beurré*; Dr. WENDELL preferred the *Winkfield*, *Winter Nelis*, and *Easter Beurré* on quince. For exclusive raising on quince, P. BARRY would prefer the *Winkfield*, *Glout Morceau*, and *Easter Beurré*. A few gentlemen who were acquainted with the *Doyenné gris d'Hiver*, regarded it as giving the highest promise of all the new winter sorts.

Some discussion occurred in relation to the difficulty of sending ripened winter pears to city markets in winter, from the danger of freezing on the way. J. BATTY said that the

practice was now common of running freight cars, warmed artificially, for carrying potatoes from Northern New York and Vermont to the Boston market, in the depth of winter; and that no difficulty could occur in the case of winter pears. It was, however, believed by others, that as soon as winter pears should be raised in large quantities, establishments would spring up in the cities for purchasing winter pears in autumn, when they could be most safely transported to a distance, and for ripening them on a large scale for the market. The ripening process could be done more economically if performed in a wholesale manner, and could doubtless be more perfectly completed, than by any small arrangements for the purpose by the raisers of the fruit.

THE SHELDON PEAR—EFFECTS OF THINNING.—We have often alluded to the necessity of thinning a heavy crop of fruit in order to secure fair and finely grown specimens as well as to save the tree from injury; but with all that has been said, the matter receives very little attention, and everywhere—both in gardens and orchards—we see trees overloaded and breaking down with small, indifferent fruit, scarcely worth gathering. We saw lately a very striking instance of the effects of a light crop on the size of fruits. At the late show of the Genesee Valley Horticultural Society, a dish of *Sheldon* pears was exhibited by the Hon. L. A. WARD, all measuring full three inches in diameter each way. We took the trouble to inquire into the circumstances of their growth, and we were informed that the crop was unusually light. The weather in the spring had performed the thinning process effectually, and has thus shown us what may be done with the *Sheldon*. We may add, too, that these *Sheldons* were of the finest quality, equal, at least, to the best pear we have ever tasted. We are not sorry, therefore, at the part we have taken in bringing it to notice.

WESTERN FRUITS.—We are indebted to JAMES H. WATTS, Esq., for an opportunity of examining superb specimens of the following varieties of apples which he brought from the pomological meeting at Chicago: *Baldwin, Domine, Rambo, Vandervere, R. I. Greening, Maiden's Blush, Willow Twig, Northern Spy, Esopus Spitzenburgh, Yellow Bellflower, Newtown Pippin, Rawle's Janet, Fall Pippin, Jonathan, Fall Wine*, and some other varieties. Judging from these specimens, they have been grown in a soil and climate particularly favorable to them. A very handsome red cheeked *Virgalieu* pear accompanied the apples, and if we may be permitted to judge from one specimen, we should say this variety will succeed as well in the West as it does in Western New York.

PEACHES.—While the apple crop in this section of the country has partially failed this season, probably in consequence of previous over-bearing, the peach crop has been one of almost unrivalled abundance. Stakes, cords—all the usual appliances have failed to keep together the over-burdened trees, and the advantages of shortening-in the branches, and thinning the fruit, has been clearly demonstrated.

It is satisfactory to have every thing fruit, in order to prove the varieties; and if it were not for the confusion of names, I should like to give you some notes on the period of ripening, character of the trees, &c., in our region. Perhaps I can get at it by noticing those whose genuineness is doubted as I proceed.

Fay's Anne—Ripened August 21st. Fruit rather below medium in size; fair; on clay soil a little acid; on gravelly soil juicy and sweet; very good.

Tillotson—August 21st. Fruit medium size, fair, and excellent. This tree, on our clay soil, after a few years of slow growth, shoots up and becomes a good sized tree. I saw it this spring.

in the garden of a nurseryman, in the *gravelly* soil along the shore of Lake Erie, where it seemed stunted and much mildewed. This struck me as strange; yet as there were whole rows of it in the same condition, the fact appeared well established.

Cole's Early Red—Ripened August 24th. I saw this in a neighbor's garden. Fruit fair, medium sized, of good flavor, and seeming every way worthy of cultivation.

Yellow Rareripe—August 24th. Fruit orange, with a red cheek, fair, medium sized, sweet, and moderately good. Tree a thrifty grower.

Early York—September 1st. Fruit fair, large, very sweet, and fine every way—worthy of cultivation.

Grosse Mignonne—This tree, obtained of ELLWANGER & BARRY, according to the books is misnamed, the flowers being small, &c. The tree is a moderate bearer. Fruit large, groundwork yellowish-white, with a rich red cheek—large specimens always somewhat depressed—rich, sweet, juicy—surpassing any thing of the peach kind I have met with. Ripened September 4th.

Royal George (misnamed)—September 4th. Fruit large, entirely covered with red; point depressed; second rate.

White Imperial—September 6th. Tree a good grower. Fruit sweet and good, but rotted this year a good deal on the tree.

Griff's Yellow Cling—September 10th. Tree obtained of ELLIOT & Co. Fruit very large, good specimens measuring eight and-a-half inches round; deep orange, with much red; larger and finer than the *Lemon Cling*, and ripening earlier.

Old Mizon Free—September 18th. One of the finest trees to grow, and one of the best late peaches we have. Fruit large, fair, and beautiful—every way excellent.

Marsh Free—September 18th. Fruited for the first time; large and fair, but acid.

Brevoort—September 18th. Tree drops much of its fruit prematurely. Fruit of good size, and the fairer specimens usually rich for so late a fruit.

Lemon Cling—September 20th. Large, fair, exceedingly beautiful, juicy, but acid. I ate this fruit in BRYANT & BEECHER's garden, near Erie, some two weeks ago, from a tree where it seemed to have prematurely ripened; it was there sweet and very good. I think it requires a longer season than ours to produce it in its perfection.

Morris' White Rareripe—September 20th. We received trees of this fruit from Cincinnati as the *Washington*, and from Buffalo as the *Sweetwater*. It is an excellent bearer, but the fruit is apt to sun-burn and crack. The fair specimens have sometimes a slight blush upon them. Fruit of good size, occasionally with a slight bitter or nauseous flavor; but when fully ripe, juicy, sweet, melting and delicious.

Morrison's Pound—September 20th. Contrary to Mr. ELLIOTT's experience, this tree, with me, is a good and constant bearer. Fruit fair and very large, but coarse; second rate.

Haine's Red and Coolidge's Favorite—Matured September 1st, and sustained their reputation.

President—Ripens October 1st. Good size and flavor, but requires a longer summer than ours.

Seedlings—I have raised these from the *Grosse Mignonne* and *Morris' White*, corresponding in the time of maturity with the parent tree, and the fruit equal in character.

George IV.—September 10th. This Mr. DOWNING calls the best peach for general culture, and Mr. PRINCE asserts it to be identical with *Prince's Rareripe*. I saw several rows of trees this month said to be *Prince's Rareripe* in a Lake Erie nursery so mildewed that the proprietor of the garden intends to reject them. The tree sent to me for the *George IV.* is a fine, thrifty grower; the fruit large, round, much covered with red, with rather a grayish look, good, but not equal to some others. Stone small.

This year has clearly demonstrated to our farmers that a fine fruit can be grown here as anywhere; and it is gratifying to observe the interest that is being awakened on the subject.

I note your theory about the curl, which was less prevalent this year than last. I agree with you that sudden changes of weather may develop the disease, but doubt if this is the *sole cause*.

The curl is comparatively a recent disease, while sudden changes of the weather date back as far as the recollection of our "oldest inhabitant." I have also seen the curl under glass, but in a milder form. I think, then, that the weather gives to the disease its malignancy by aggravating a constitutional disease of the peach, resting in some cause as yet unknown. Will you accept of the modification?

We have little or no potato blight here this year, the theory of constitutional exhaustion to the contrary notwithstanding. A. HUIDEKOPER.—*Meadville, Pa.*

CANADIAN FLOWER GATHERER.—Lilies.

BY MRS. TRAILL, AUTHOR OF "FOREST GLEANINGS," OAKLAND, RICE LAKE, C. W.

"Behold the Lilies, how they grow."

THERE is something in the very name Lily* that seems to imply grace and beauty. Now naturally does the mind associate ideas of loveliness with the words of the SAVIOR, "Behold the Lilies of the field: they toil not, neither do they spin; and yet I say unto you that SOLOMON in all his glory was not arrayed like one of these." "These words," says Sir JAMES SMITH (a name celebrated among English botanists), "are commonly applied to the White Lily or the Tulips, neither of which are natives of Palestine. It is natural to presume that the Divine Teacher, according to his usual custom, called the attention of his hearers to some object near at hand; and as the fields of the Levant are overrun with the *Amarillus lutea*, whose golden liliaceous blossoms in autumn afford one of the most brilliant prospects in nature, the expression of 'SOLOMON in all his glory' was peculiarly appropriate." The valleys near Jerusalem at this day are carpeted with these lovely Lilies, serving as a mute illustration of the text.

The Lily tribe has a wide range, and seems to be found under all climes, in some form or other. It blooms in the frozen zone, as well as beneath the suns of Asia. Dr. RICHARDSON mentions the *Lilium Philadelphicum* among the arctic flowers, noticing that the root is eaten by the field-mice, and from that circumstance has gained the local name of Mouse-root; while the Canada porcupine (*Nystriz pilosa*) feeds largely upon the roots of the *Lilium glabra*.

I think it is the *Lilium Philadelphicum* that adorns our oak openings with its large open bells of gorgeous scarlet, dotted with black spots at the base of each petal, and may be seen raising its stately head above its more lowly comrades—the azure Lupine and white Wintergreen (*Pyrola rotundifolia*)—with which it forms a charming contrast.

Our woods and plains afford specimens of many liliaceous flowers. Botanists seem to me fond of separating the members of this fair family, and putting asunder those whom nature has joined together. All bulbous-rooted, hexandrous, hexapetalous flowers, are naturally allied, and should be, I think, classed in one order. I would arrange all the families of plants in grades, or steps, linking them together in a great natural chain. Botanists would doubtless think me presumptuous in proposing any classification opposed to the popular ones in vogue, and possibly great objections might exist which I have not considered. I therefore offer the suggestion with all humility and deference to the learned in the science.

But while I lament that the name of Lily is taken from some that I think ought to possess it, I must also observe that it is similarly bestowed upon others who have no claim to it. Who that has ever floated over the still waters of any of our small inland lakes or slow-flowing rivers, but has been tempted, at the risk of upsetting the frail bark canoe or skiff, to put forth a hand to snatch one of those lovely Water Lilies (*Nymphaea odorata*)—those queens of the lakes, that rest in spotless pride upon the waters—or gazed down through their depths with wishful and admiring eyes at the exquisite buds, half unfolded, that are springing upward to expand their pure silken

* I find that ERON, in his notes to *Lilium*, observes, "From the Greek *leirion*, lily, smooth, graceful; or from the Celtic *li*, whiteness."

petals to the sunbeam, and to bathe in the light and air so necessary to the perfection of their fruit. Yet the *Nymphaea* is not really a Lily; and many a one not skilled in floral names call the yellow Iris and the blue Iris Water Lilies.

The biography of remarkable flowers might, in skillful hands, be made almost as interesting and instructive as the lives of celebrated men and women; for there are flowers that have an individual history attached to them, and possess a name and celebrity above their fellows. As an illustration, I will select the history of the Guernsey Lily; which I extract from a volume entitled *Historic Scenes and Poetic Fancies*, by AGNES STRICKLAND, which, as it may not be generally known, will possibly be read with interest by some of the subscribers of the *Horticulturist*:

"The first of this splendid species ever seen in Europe was observed growing at high water mark on the Guernsey shore, a few weeks after the wreck of a large home-bound East Indiaman, which, with all her crew, and passengers, and costly freight, was lost on the perilous reef off that coast. This flower, being the sole relic of the rich cargo, was called by the peasants the 'Lily of the Wreck;' and being greatly prized, not only from this circumstance but for its rare beauty, was carefully preserved and cultivated. In the course of a few years the species was propagated throughout the island, where it flourished so profusely as to become in time an article of commerce; and being erroneously supposed by foreign florists to be indigenous to that locality, has by them been named 'The Guernsey Lily.' The tradition of its first appearance is, however, familiar to the sea-faring population of the island."

I select from the little poem that precedes this note, the closing lines

"Nought reached the land in that dreadful hour,
Save the simple bulb of an Indian flower,
Which the surges washed from the found'ring bark;
And when autumn came, at high water mark,
The Guernsey fishers, wondering, eyed
Its buds expand in gorgeous pride,
And said, so fair a plant before
Did never bloom on their rugged shore.

"The Lily of the Wreck at first
It was called, by those who had fondly nursed
The pilgrim flower: but its fame in time
Went forth to every western clime,
And now those orient Lilies claim
From Guernsey's tale their general name,
For they flourish as free on its rocky strand
As beneath the suns of their own bright land"

CATALOGUES RECEIVED.—*Catalogue of Fruits and Ornamental Trees, Evergreens, Flowering Plants, Roses, &c., cultivated and for sale at the Hopewell Nurseries, near Fredricksburg, Va.* HENRY R. ROBESY, Proprietor.

Twelfth edition of R. BUIET'S Select Catalogue of Rare and Popular Flowering Greenhouse and Hot-house Plants, including New Species and Varieties lately introduced.

Descriptive Catalogue of the Andre Le Roy's Nurseries, Angers, France.—This is the most complete and valuable catalogue which M. LE ROY has yet sent out—giving very ample lists of synonyms of varieties, in connection with the name of authors or cultivators, who have introduced or disseminated them. We must say, however, that these latter indications, as far as relates to American varieties, are generally incorrect.

Answers to Correspondents.

In the October number of the *Horticulturist* for 1852, page 459, *chloride of calcium* was said to be used by French horticulturists to absorb the moisture of fruit rooms; and in a note upon the same page, chloride of calcium was said to be obtained by heating common chloride of lime. The October number for 1853, page 450, gives the same remedy for superabundant moisture in fruit rooms. Now, chloride of lime, as it absorbs moisture, evolves chlorine gas in such quantity as to impart its own flavor to every thing eatable exposed to its atmosphere. Even after saturation with moisture, and being dried by as much heat as hickory wood and a tin plate kitchen stove can supply, it filled the fruit room with chlorine gas as completely as before. If there be a chloride of calcium (or of any thing else), which will absorb moisture without giving out chlorine gas, by informing where it can be had, and at what price, you will *very much* oblige at least one

SUBSCRIBER.

P. S.—If no compound of chlorine will answer the purpose, is there no other remedy for dampness, without changing the temperature?

We have not used the chloride of calcium, and therefore can not say whether it affects the flavor of fruit or not. It can be procured at the druggists at about one shilling per pound, or perhaps less. We have used fresh unslaked lime, which absorbs moisture, and does not, that we are aware of, affect the flavor of fruits.

How is the best way of vegetating Sugar Maple, Mountain Ash, American Larch, and Strawberry Tree (*Euonymus Americanus*) seeds? W.—*Galesburg*.

The Maple and Larch seeds, gathered this season, may be sown next spring, as they grow the first season. The *Euonymus* and Mountain Ash should be mixed with earth, and be allowed to remain so until next spring.

Will you, through the *Horticulturist*, give your opinion on the propriety of setting out an orchard of winter apples on the Doucain stock? My idea is to avoid the high winds of this western country, that shake the trees before the apples are ripe. E. DAYTON.—*Huntly Grove, Ill.*

You can have an orchard of low-headed trees on the Doucain or common stock—would prefer the latter for orchard.

Will the *embanking* or the *ridging* process for the nursery rows, for winter, be advisable in a nursery of stocks budded close to the ground—Peach, Cherry, and Apple stocks—the rows crossing sections of each? Would the earth over the bud serve to protect or to smother it? The soil is not particularly inclined to heave. M.

We would not earth up so high as to cover the buds; we have seen much injury done by it.

Agricultural and Horticultural Societies.

HORTICULTURAL DISPLAY AT SARATOGA.—The arrangements made for the display of horticultural products at Saratoga were decidedly the worst we have ever seen made at any State Fair in this State, since the first. All preparations seem to have been postponed until the last moment. Then, by some accident, the tent failed to arrive; the first day was rainy, and those exhibitors who had arrived with their articles from a distance were

compelled to remain two days before they could open or unpack them. Of course, many of the most mature fruits and perishable flowers were ruined. But this was not all: when the tent was raised, there was a perfect scramble for places, and the staging erected was found not more than half extensive enough to admit of the proper display of the objects brought for exhibition; large quantities of both fruits and flowers were consequently never shown, and confusion and disappointment for a time reigned supreme.

We are sorry for this backward step of our great Society, because it has certainly given it a severe blow; and there was no excuse whatever for it, but downright carelessness on the part of those whose duty it was to see the arrangements made. We hope for better in the future; but really, until there be among the directors of this Society at least one man as much interested in horticulture as there are now many in other departments, we can not hope to see a well ordered horticultural display at our State Fairs.

The managers of the Society must be well aware that Floral Hall has always been among the leading attractions of these Fairs. Let any one watch the crowd entering the gates, and they will see a steady stream moving toward the tent of fruits and flowers. That seems to be the great center; and the reason why it is so, is that the articles there displayed are far more rare and, to the multitude, more interesting than the finest Shorthorns or Devons, or Shanghae fowls, or Black Hawk horses. These are all special departments, and have their special admirers; but every man, woman, and child, who enters the gates, loves fruits and flowers, and knowing or supposing that the finest in the State are assembled in Floral Hall, there they must first go.

If this department of the orchard and the garden be allowed to dwindle down, and finally die out, as it evidently will under the present system, these State Fairs will be divested of one of their most interesting features, as the receipts will soon give evidence. By sustaining it well, the Society will not merely consult its own interests, but it will assist greatly in educating the public taste, and in promoting a branch of culture which has a most important bearing upon the prosperity of the country. The horticultural department of the State Agricultural Society has never been well managed, for the reason, we suppose, as we have already stated, that no one in its councils has felt more than the general interest in the subject which all intelligent farmers and country gentlemen feel. It was stated at Saratoga, by a gentleman who should know, and who is very accurate in his statements, that one season the Floral Hall cost about \$1,000, and the same season the horticultural premiums offered amounted to about \$17, all told!

But after all, the show was a good one—in many respects one of the best the Society has yet made. The display of fruit was exceedingly interesting and instructive. Visitors, as they passed around, seemed at once surprised and delighted. It afforded very gratifying evidence of the progress we are making in fruit culture. Many of the collections were rare and valuable, the specimens unusually fine, and, with a few exceptions, accurately named and tastefully exhibited.

Among amateurs, the collection of D. T. VAIL, Esq., of Troy, had no rival; it embraced some eighty varieties of pears, remarkably well grown, and including many of the finest new sorts—such as *Duchesse d'Orleans*, *Burré d'Anjou*, *Burré Superfin*, &c. Probably no other amateur cultivator in this State could bring forward such a collection.

The nurserymen made a very spirited and creditable display. Messrs. HOVEY & Co., of Boston, sent a fine collection of 150 varieties of pears. This, we believe, was the only foreign contribution. Messrs. A. SAUL & Co., of Newburgh; WILSON, THORBURN, & TELLER, of Albany; THORP, SMITH, HANCOCK, & Co., of Syracuse; JOHN MORSE, of Cayuga; T. O.

MAXWELL & Co., of Geneva; A. FROST & Co., G. H. CHERRY & Co., and ELLWANGER & BARRY, of Rochester; all contributed largely. JOHN J. THOMAS, of Macedon, presented a handsome collection. Among his pears we observed a dish of *Washington*—very beautiful—the finest we have seen. N. & E. S. HAYWARD, of Brighton, as usual, made a fine display of apples, peaches, and grapes.

There was a strong competition for the premiums offered for select assortments—such as the best 20, 12, 8, &c., of the various fruits.

Of peaches there were few. MR. MORSE, of Cayuga, and the Messrs. HAYWARD, of Brighton, had small collections. It was also too late for plums, but MR. E. DORR, of Albany, had a nice collection of 12 or 14 varieties; MR. BENNETT, of Mechanicsville, a small collection; and ELLWANGER & BARRY, some 14 varieties.

In the way of flowers, Mechanicsville made the most numerous contributions. MRS. E. L. E. SMITH, of that place, presented a very handsome named collection of Dahlias, including some fine new sorts. MRS. T. MABBETT, MRS. SAMUEL LEWIS, MRS. J. M. SMITH, MRS. GEO. WARREN, and MRS. P. BENNETT, all of Mechanicsville, contributed flowers, boquets, and floral ornaments, in profusion. WM. NEWCOMB made a showy display of Asters.

Among nurserymen, the largest contributors were JONATHAN BATTY, of Keeseville; JAS. WILSON, of Albany; and Messrs. FROST & Co., and ELLWANGER & BARRY, of Rochester.

The best collections of Roses, Verbenas, &c., were from a distance, and had all suffered much from carriage; beside, there was not space enough to arrange them to appear well. We regretted to see good things crowded off the stands to make way for mere rubbish, and to see valuable space occupied with objects miscalled floral ornaments, anything but ornamental.

Of vegetables there were a few small collections. The best were from THEODORE BACKUS, of Rochester; N. CULVER, of Wayne county; and P. REILLY, gardener to J. B. FINLEY, Esq., of Saratoga. MR. CROSMAN, of Rochester, sent a good collection, but they never reached the show grounds.

We must say for the superintendent of the floral tent, MR. A. F. CHATFIELD, of Albany, that he did all in his power for the convenience of exhibitors, and the general good of the exhibition. The fault was not his that arrangements were not more satisfactory.

We subjoin the reports of committees, as follows:

FLOWERS.—Nurserymen's List.—Greatest variety and quantity of flowers, William Newcomb, Pittstown, \$8; second do., James Wilson, 5. Greatest variety of Dahlias, James Wilson, Albany, 5; second do., J. Battay, Keeseville, 3. Best twenty-four dissimilar blooms, J. Battay, Keeseville, 3; second best, William Newcomb, Pittstown, 2. Best single Dahlia, William Newcomb, Pittstown, 2; second best, J. Wilson, Albany, 1. Greatest variety of Roses, A. Frost & Co., Rochester, 5; second best, Ellwanger & Barry, Rochester, 3. Best ten varieties of Phloxes, J. Wilson, Albany, 3; second best, Ellwanger & Barry, Rochester, 2. Greatest variety of Verbenas, Ellwanger & Barry, Rochester, 5; second do., J. Wilson, Albany, 3. Best twelve varieties, A. Frost & Co., Rochester, 2. Best collection of German Asters, William Newcomb, Pittstown, 5. Best seedling, William Newcomb, Pittstown, 2. Best and greatest variety of Pansies, William Newcomb, Pittstown, 3.

FLOWERS.—Amateur List.—Greatest variety and quantity of flowers, Mrs. J. T. Van Namee, Pittstown, \$5; second do., Mrs. Bennett, Mechanicsville, 3. Greatest variety of Dahlias, Mrs. L. E. Smith, Mechanicsville, 5; second do., Mrs. P. Bennett, Mechanicsville, 3. Best twelve dissimilar blooms, George Warren, Mechanicsville, 3; second best, Mrs. L. E. Smith, Mechanicsville, 2. Best six varieties, George Warren, Mechanicsville, 2; second best, Mrs. P. Bennett, Mechanicsville, 1. Best single variety, G. Warren, Mechanicsville, S. S. Medal. Best six varieties of Phloxes, Mrs. William Newcomb, Pittstown, 3. Best seedling, Mrs. William Newcomb, Pittstown, 1. Greatest

variety of Verbenas, Mrs. William Newcomb, Pittstown, 5; second do., Mrs. T. Mabbett, Mechanicsville, 3. Best six varieties, Mrs. T. Mabbett, Mechanicsville, 3; second best, Mrs. William Newcomb, Pittstown, 2. Best three varieties, Mrs. William Newcomb, Pittstown, 2. Best seedling, Mrs. T. Mabbett, Mechanicsville, 2; second best, Mrs. J. B. Finlay, Saratoga, 1. Best collection of German Asters, Mrs. T. Mabbett, Mechanicsville, 5; second best, Mrs. Van Namee, Pittstown, 3.

FLOWERS.—*General List, open to all Competitors.*—Best floral ornament, George Warren, \$5. Best floral design, Mrs. T. Mabbett, Mechanicsville, 5; second best, Mrs. P. Bennett, Mechanicsville, 3. Best hand bouquet, flat, James Wilson, Albany, 3; second best, Mrs. P. Bennett, Mechanicsville, 2. Best hand bouquet, round, James Wilson, Albany, 3; second best, Mrs. G. W. Wilcox, Saratoga, 2. Best basket bouquet, with handle, Eliza D. Palmer, Greenfield, 3. For the most beautifully arranged basket of flowers, Mrs. Emily Newcomb, Pittstown, 3. Best exhibition of specimens of dried plants, Mrs. Isaac Clement, Halfmoon, S. S. Med.

FRUIT.—*Professional List.*—*Apples.*—Best twenty varieties of good table apples, three of each variety, named and labelled, grown by exhibitor, George H. Cherry, Rochester, \$10; second best, A. Frost & Co., Rochester, 7; third best, Ellwanger & Barry, Rochester, 5; fourth best, John Morse, Cayuga Bridge, Vol. Trans. Best ten varieties of table apples, John Morse, Cayuga Bridge, 8; second best, Thorp, Smith, Hanchett, & Co., Syracuse, 5. Best basket of standard fruits, to be composed of a variety of fruits, at least three of each variety, John Morse, Cayuga Bridge, 6.

Pears.—Best twelve varieties of pears, named and labelled, Ellwanger & Barry, Rochester, 8; second best, John Morse, Cayuga Bridge, 6; third best, Thorp, Smith, Hanchett, & Co., Syracuse, 4; fourth best, James Wilson, Albany, Barry's Fruit Gar. Best six varieties of pears, three of each variety, Ellwanger & Barry, Rochester, 5; second best, Maxwell Brothers, Geneva, 3; third best, John Morse, Cayuga Bridge, 2; fourth best, Thorp, Smith, Hanchett, & Co., Syracuse, Thomas' Fruit Cult. Best collection of newly-introduced pears, with a description, &c., Ellwanger & Barry, Rochester, Dip. and Hovey's Col'd Fruits.

Peaches.—Best six varieties of peaches, named and labelled, John Morse, Cayuga Bridge, 5; second best, John Morse, 3. Best three varieties of peaches, named and labelled, John Morse, 3; second best, John Morse, 2. Best twelve peaches, John Morse, 3; second best, John Morse, 2.

Plums.—Best collection of plums, six specimens each variety, Ellwanger & Barry, Rochester, 5. Best four varieties of good plums, six specimens each, James Wilson, Albany, 3.

Grapes.—Best and most extensive collection of good native grapes, grown in the open air, A. Frost & Co., Rochester, 5.

FRUIT.—*Amateur List.*—*Apples.*—For the best twenty varieties of good table apples, three of each variety, named and labelled, grown by exhibitors, N. & E. S. Hayward, Rochester, \$10; second best, S. H. Case, New Hartford, Oneida county, 7; third best, E. R. Jones, Ballston, 5; Best nineteen varieties of table apples, James Van Namee, Pittstown, 8; second best, N. & E. S. Hayward, Rochester, 5; third best, E. R. Jones, Ballston; fourth best, J. H. Case, New Hartford, Oneida county, Down. Fruit. Best fall seedling apple for all purposes, with description of tree, history of its origin, &c., one dozen specimens to be exhibited, E. R. Jones, Ballston, 5. Best basket of standard fruits, at least of three varieties, Robert McDonnell, Saratoga county, 6; second best, James T. Van Namee, Pittstown, 4.

Pears.—For the best twelve varieties of pears, named and labelled, D. T. Vail, Troy, 8; second best, E. R. Jones, Ballston, 6. Best six varieties of pears, three of each variety, D. T. Vail, Troy, 5; second best, Elisha Dorr, Albany, 3; third best, H. G. Dickinson, Lyons, 2; fourth best, E. R. Jones, Ballston, Thomas' Fruit Cult. Best collection of newly-introduced pears, with a description, &c., D. T. Vail, Troy, Dip. and Hovey's Col'd Fruits.

Peaches.—Best six varieties of peaches, named and labelled, N. & E. S. Hayward, Rochester, 5. Best three varieties of peaches, named and labelled, P. Bennett, Mechanicsville, 3; second best, N. & E. S. Hayward, Rochester, 2. Best twelve peaches, Robert McDonnell, Greenfield, Saratoga county, 3; second best, N. & E. S. Hayward, Rochester, 2; third best, H. G. Dickinson, Lyons, Vol. Trans. Best seedling variety, six specimens, Elisha Dorr, Albany, 3.

Plums.—Best collection of plums, six specimens of each variety, E. Dorr, Albany, 5; second best, P. Bennett, Mechanicsville, 3; third best, James T. Van Namee, Pittstown, 1. Best four

varieties of good plums, six specimens each, E. Dorr, Albany, 3. Best twelve plums, choice variety, E. Dorr, Albany, 2; second best, James T. Van Namee, Vol. Trans.

Quinces.—Best twelve quinces of any variety, P. Bennett, Mechanicsville, 3; second best, N. & E. S. Hayward, Rochester, 2; third best, Robert McDonnell, Greenfield, Trans.

Grapes.—Best and most extensive collection of good native grapes, grown in the open air, N. & E. S. Hayward, Rochester, 5; second best, P. Bennett, Mechanicsville, 3; third best, E. Dorr, Albany, 2. Best three varieties of native or foreign grapes, grown under glass, three bunches of each variety to be shown, John Greig, Canandaigua, 5. P. Barber, for three bunches of Sweet Water grapes (discretionary premium), Diploma. Best dish of native grapes, E. Dorr, Albany, Vol. Trans.

Watermelons.—Best specimen of any variety of watermelons, John Ingersoll, Wilton, 3; second best, N. Culver, 2; third best, J. M. Andrews, Saratoga Springs, 1. Mr. Cruger's gardener (discretionary premium), S. S. Medal. Best collection of watermelons, J. M. Andrews, Saratoga, 3; second best, John Ingersoll, Wilton, 2.

Muskmelons.—Best specimen of any variety of muskmelons, John Ingersoll, Wilton, 3; second best, G. H. Cherry, Rochester, 2; third best, C. M. Davidson, Whitehall, 1.

Cranberries.—Best peak of domestic culture cranberries, Knowlton Howland, Mechanicsville, 5.

Raspberries.—Ever-bearing raspberry, Knowlton Howland, Mechanicsville (discretionary premium), Thomas' Fruit Cult.

FOREIGN FRUITS.—One hundred and fifty-one varieties of pears, Hovey & Co., Boston, Sil. Med. Nine varieties of apples, N. Richards, Vergennes, Vt., Vol. Trans. One pomegranate, B. F. Mooley, Albany, Vol. Trans.

VEGETABLES.—Twelve best white table turnips, J. C. Rouse, Saratoga Springs, \$3; second best, Patrick Raley, Saratoga Springs, 2. Twelve best carrots, Patrick Raley, Saratoga Springs, 3; second best, J. C. Rouse, Saratoga Springs, 2. Twelve best beets, N. Culver, Wayne county, 3; second best, John Gifford, Saratoga, 2. Twelve best parsnips, Patrick Raley, Saratoga, 3; second best, Theodore Backus, Rochester, 2. Twelve best onions, J. C. Rouse, Saratoga, 3; second best, Theodore Backus, Rochester, 2. Six best heads of cabbage, N. Culver, Wayne county, 3; second best, J. C. Rouse, Saratoga, 2. Twelve best tomatoes, P. Bennett, Mechanicsville, 3; second best, Patrick Raley, Saratoga, 2. Two best purple egg plants, A. M. Hart, Saratoga, 3. Twelve best sweet potatoes, George W. Herrick, Saratoga, 3; second best, Patrick Raley, Saratoga, 2. Best half peck of Lima beans, N. Culver, Wayne county, 3; second best, N. & E. S. Hayward, Rochester, 2. Best bunch double parsley, Z. M. Saunders, Albany county, 3; second best, Patrick Raley, Saratoga, 2. Three best garden squashes, J. C. Rouse, Saratoga, 3; second best, Seth Whalen, Saratoga, 2. Three best large squashes, J. C. Rouse, Saratoga, 3. Twelve best ears of yellow seed corn, Obadiah Howland, Cayuga county, 3; second best, Isaac Frink, Saratoga, 2. Twelve best ears of white seed corn, N. Culver, Wayne county, 3; second best, O. L. Barbour, Saratoga, 2. Best half peck of table potatoes, S. G. Smith, Halfmoon, 3; second best, Knowlton Howland, Mechanicsville, 2. Best and greatest variety of vegetables raised by exhibitor, Theodore Backus, Rochester, 5; second best, N. Culver, Wayne county, 3. Best new and valuable variety of vegetable, with evidence of its superiority, C. E. Goodrich, Utica, 3. Z. M. Saunders, Albany, for a sample of celery (discretionary premium), Vol. Trans.

HORTICULTURAL PREMIUMS AWARDED AT THE OHIO STATE FAIR.—The following are the horticultural premiums awarded at the late State Fair, at Dayton, Ohio:

FLOWERS.—*Professional List*.—Mrs. W. Jennison, Dayton, variety of dahlias, \$2. William Heaver, Cincinnati, dahlias, 24 varieties, 2. William Heaver, Cincinnati, roses, variety, 5. Wm. Heaver, Cincinnati, verbenas, variety, Horticulturist. W. E. Mears, Mt. Washington, 12 varieties, Horticulturist, or 2.

FLOWERS.—*Amateur List*.—H. Langstedt, Dayton, variety cut flowers, Silver Medal. Mrs. R. W. Steele, Dayton, dahlias, 12 blooms, Horticulturist, or \$3. Miss E. Dunlevy, Lebanon, phloxes, 6 varieties, Hort., or 3. Mrs. R. W. Steele, Dayton, 12 verbenas, Hort., or 3. Mrs. E. H. Peirce,

Dayton, 12 verbenas, Hort., or 2. Mrs. R. W. Steele, Dayton, seedling verberna, Hort., or 2. Mrs. E. H. Peirce, Dayton, German asters, Hort., or 2.

FLOWERS—General List.—H. Pease, Dayton, green-house plants, Sil. Med. Mrs. W. Jennison, Dayton, floral design, Sil. Med., or Hort. and \$5. Mrs. E. H. Peirce, Dayton, floral design, 5. Mrs. W. Jennison, Dayton, green-house plants in bloom, 10. Mrs. E. H. Peirce, Dayton, floral ornaments, Sil. Med. and 10. H. Langstedt, Dayton, floral ornament, 5. Wm. Heaver, Cincinnati, hand boquets, flat, W. Hort. Rev., or 3. Mrs. W. Jennison, Dayton, hand boquets, flat, W. Hort. Rev., or 2. Mrs. W. I. Thomas, Troy, hand boquets, round, 2. Mrs. W. I. Thomas, Troy, basket boquets, 5. Mrs. R. W. Steele, Dayton, basket flowers, dip. and 3.

FRUITS—Apples.—F. G. Carey, College Hill, variety apples, dip. and \$15. T. V. Petticolas, Clermont county, variety apples, dip. and 10. Ellwanger & Barry, Rochester, N. Y., 12 varieties apples, dip. and 3. W. E. Mears, Mt. Washington, 12 varieties table apples, dip. and 5. Thorp, Smith, & Hanchett, Syracuse, N. Y., 6 varieties apples, dip. and 3. Geraham, Perdue, Fayette county, 6 varieties apples, dip. and 2. *Pears*.—Thorp, Smith, & Hanchett, Syracuse, Hovey's colored fruits and 5. Ellwanger & Barry, Rochester, N. Y., 10. Thorp, Smith, & Hanchett, Syracuse, N. Y., autumn pears, 5. Ellwanger & Barry, Rochester, N. Y., autumn pears, 3. Ellwanger & Barry, Rochester, N. Y. winter pears, 10. *Peaches*.—Moses Kelley, Waynesville, 12 peaches, 5. Moses Kelley, Waynesville, 12 peaches, 3. C. F. Keyser, Dayton, seedling, 6 varieties, dip. and 5. C. Sprague, Tansalbe, 6 varieties, 3. *Plums*.—Thorp, Smith, Hanchett, & Co., plums, dip. and cup, 10. Ellwanger & Barry, 3 varieties plums, 3. Ellwanger & Barry, 12 varieties plums, 2. Thorp, Smith, Hanchett, & Co., 12 varieties plums, 3. *Quinces*.—Mrs. E. Fowler, Dayton, 12 quinces, dip. and 3. J. Scott, Hamilton, 12 quinces, 2. *Grapes*.—R. Buchanan, Cincinnati, 9 varieties native grape, dip. and 10. Thora Smith, Buchanan & Co., collections native grapes, 5. W. Resor, Cincinnati, 3 varieties foreign grapes, 5. W. Sims, dish native grapes, 5.

WATERMELONS, &c.—Samuel Neibel, Montgomery county, 6 watermelons, \$8. Charles Stuck, Dayton, 6 watermelons, 2. Joseph Mock, Columbus, 6 varieties muskmelons, 3.

VEGETABLES.—J. McReynolds, Dayton, 12 beets, \$3. G. S. Innis, Franklin county, 12 parsnips, 3. G. S. Innis, Franklin county, 1 peck onions, 3. Joseph Mock Columbus, 1 peck sweet potatoes, 5. R. Kilpatrick, New Madison, half bushel table beets, 5. J. M. Reynolds, Dayton, half bushel table beets, 5. Joseph Mock, Columbus, 6 seedling potatoes, 3. G. S. Innis, Franklin county, 3 bunches salsify, 3. G. S. Innis, Franklin county, 12 carrots, 3. Joel Funk, Champaign county, 1 peck tomatoes, 5. Joel Funk, Champaign county, 1 egg plant, 5. Mrs. W. Hunt, Springfield, half peck peppers, 3. Joseph Mock, Columbus, half peck Lima beans, 3. William Stancel, Montgomery county, 1 peck white beans, 2. Joseph Mock, Columbus, 1 pumpkin, 3. G. S. Innis, Columbus, 12 ears sweet corn, 5.

MARYLAND HORTICULTURAL SOCIETY.—The Society held its annual exhibition on the 27th, 28th, and 29th of September. The various departments were well sustained, and an improvement observable in some respects, compared with former exhibitions. The supply of fruit was limited.

A collection of foreign grapes, from the garden of G. BROWN, Esq., was highly creditable to his gardener, MR. STANDMEYER. The Hamburgs, Muscats, and Frontignacs, were well developed, although rather deficient in color. Black Hamburgs from open air culture were deposited by Capt. A. C. PRAGHT, THOS. V. BRUNDIGE, and R. GIBSON. These were also of a red color, instead of black; otherwise the fruit was very large and handsome. Native grapes were in great profusion; the Isabellas from Mr. BROWN were very superior.

Messrs. S. FRIST & SONS sent a collection of pears—Vicar of Winkfield, Van Mons, and Winter Nelis, very large; Beurré Gris, Duchesse d'Angoulême, Bezy de Montigny, Doyenné d'Alençon, Oken d'Hiver, Passe Colmar, Duc de Bordeaux, &c. Many dishes of White Doyenné were on hand, some of them of very superior appearance. Seckel small and scarce. A single fruit of Triomphe de Jodoigne, weighing eighteen ounces, from THOS. WINANS, Esq., and several plates of large specimens from the Hon. S. WALKER, Roxbury, Mass., assisted in keeping up the interest of this department.

W. C. WILSON, Esq., sent White Marseilles and Brown Turkey figs of very superior appearance.

In the way of novelties, Capt. J. HUGS had Zante Currant grapes; Mr. CRAWFORD, medlars and varieties of filberts; and Mr. KURTZ, very large pomegranates.

The exhibition of vegetables was very extensive, and evinced superior cultivation. Much to the credit of the Society, this department of horticulture receives prominent attention. In the rage for novelties in flowers and flowering plants, the improvement and cultivation of edible vegetables seems to be considered of inferior importance. This is much to be regretted, since there is a wide field for improvement in this respect. The varieties of cultivated vegetables have become so numerous, and many of them so worthless, as to render it a necessity for societies to adopt rules for bringing into prominent notice those varieties worthy of general cultivation.

The display of ornamental plants and flowers was very large and fine. Many new plants were brought into notice by the Messrs. FEAST. Mr. JOHN FEAST had a very large collection of new and rare specimens—such as *Gardenia tubiflora*; *Hoya Mollis*, *pieta*, *imperialis*, and *bella*; *Platanthus pieta*; *Commersonia rugosa*; *Combretum macrophyllum* and *Piceanum*; *Bouvardia tryphyllum*, *venusta*, and *Ciantha*; *Posoquierea longifolia*; *Hovea Celii* and *Manglesii*; many varieties of *Cape Heaths*; *Bougainvillea spectabilis*; *Adamia cyanea*; *Coreopegia elegans*; *Dipladenia Urophylla*; *Echites pieta*; *Quisqualis sinensis*; *Stephanotis Thonarsii*; *Alloplectus speciosa*; *Bauera rubioides*; *Passiflora amabilis*; and many others. Messrs. S. FEAST & SONS also contributed many new and valuable plants—the new *Rhododendron Dalhousiana*, *Gardenia Stanleyana*, *Chirita Moonii*, *Hoya cinnamomifolia*, *Allamanda Schottii*, *Cyrtoceras multiflora*, *Clerodendron sinuatum*, &c. Mr. STANDEMEYER had a beautiful display of well grown *Achemenes*, embracing seven or eight varieties. Dr. EDMONDSON sent many of his most rare old specimens—huge plants of *Metrosideros speciosa*, *Astrapa Wallichii*, *Fourcroya Mexicana*, *Chamerops humilis*, *Tillandsia*, *Nepenthes*, *Hoya carnosa*, *Crinum amabile*, *Cactus Pereskia*, *Maranta Zebrina*, *Bonaparteia Junea* with a flower stem ten feet high; *Loquat*, *Coffee*, *Tea*, and *Banyan trees*; and many others of equal interest. Messrs. PENTLAND & BRO. contributed a very interesting collection of hardy evergreens; among them were noticed *Taxodium sempervirens*; *Deodar* and *Lebanon Cedars*; *Cryptomeria Japonica*; *Cupressus funebris*; *Juniperus excelsa*; *English*, *Irish*, and *American Yews*; various *Arbor Vites*; and others highly inviting to the lovers of beautiful trees. E. KURTZ, Esq., contributed some fine *Pomegranate trees* in a fruiting condition. A well flowered plant of *Crowea latifolia* was also noticed as fine in this collection. T. WINANS, Esq., contributed greenhouse plants, comprising several varieties of *Begonias*, *Heaths*, *Epacris*, *Azaleas*, &c. Cut flowers were shown in large quantities. The display of *Dahlias* from W. C. WILSON, Esq., and *Roses* from Mr. TUOMAT, were very superior. Mr. KURTZ had very fine *China* and *French Astera*. Mr. FUSSELL sent fine *Double Balsams*; and Mr. SHARP, fine *coxcombs*. *Boquets*, both for hand and table ornaments, were numerous and tastefully arranged. Large flower designs were furnished by Mrs. RODRIGALD and S. FEAST & SONS. An arch of evergreens and flowers, from PENTLAND BRO., was placed opposite the entrance, the architectural proportions of which attracted attention.

WM. SAUNDERS, *Cor. Secretary*.

KENTUCKY HORTICULTURAL SOCIETY—EXHIBITION AT LOUISVILLE—This exhibition was held in the very large and airy room in the Farmers' Tobacco Warehouse. The room was brilliantly illuminated, and the numerous pillars were richly decorated with evergreens. The tables literally groaned beneath the profusion of fine fruits, among which we observed some specimens of peaches, pears, and apples, that could hardly be rivalled in any climate or at any season. Among the contributors of these fruits, we observed the names of Messrs. ELLWANGER & BARRY, of Rochester, N. Y.

The floral display was really grand and beautiful. The mosaic table, the wreaths, the urns, the scales, the pyramids, the boquets, the baskets, the display of *Dahlias*, of *Roses*, of flowers in pots, evinced a degree of elegant taste in design and combination that elicited the highest admiration.

The vegetables attracted no little attention; and although the tables could have been better filled, yet we doubt if finer specimens of sugar beets, sweet potatoes, Irish potatoes, carrots, egg plants, citron, &c., could have been produced anywhere.

A beautiful marble statue, exhibited by Mr. NEEDHAM, was much admired for its chaste beauty and sweetness of expression.

The brilliantly-lighted room, with its snow-white walls and ceiling, the evergreens gracefully entwining around the pillars, the long spread tables covered with brilliant flowers and temptingly luscious fruits—and above all, the many lovely and joyous women, gracefully promenading the room, feasting the eye while listening to the strains of ARBOGAST's saxehorn band—formed a *tout ensemble*, that feasted the soul with delight, and made us dream of Paradise. But to this scene, so rapturous to the eye, was added an intellectual treat that was great and rare. We allude to Prof. BUTLER's address, which, short as it was, was in itself a gem—rich, racy, and rare. CHARLES LAMB himself never wrote any thing, we almost were about to say, half so good.

The following premiums were awarded:

FLOWERS.—For the best twelve named Dahlias, E. Wilson, \$3; for the second best, E. Wilson, \$2. For the best display of Dahlias, E. Wilson, \$3. For the best six floral hoop-wreaths, Fred. Zarger, \$5. For the best ten exotics, in bloom, Dr. Galt, \$5. For the best five exotics, in bloom, E. Wilson, \$2. For the best twelve named Roses, in pots, E. Wilson, \$3. For the best six named Roses, in pots, E. Wilson, \$2. For the best four named Roses, in pots, E. Wilson, \$1. For the best bouquet of Roses, E. Wilson, \$3; for the second best, H. Nauz, \$2. For the best display of cut flowers, in bouquet, E. Wilson, \$5; for the second best, Dr. Galt, \$3. For the best bouquet, mixed flowers, E. Wilson, \$3; for the second best, E. Wilson, \$2; for the third best, P. Berkenmayer, \$1. For the best floral device, being a magnificent floral table, a gratuity to Daniel Eyre, gardener to E. Wilson, of \$10; for the second best floral device, G. N. Peay, \$5; for the third best, A. Peter, \$3. For a fine specimen of artificial flowers, in bouquet, a gratuity was awarded to Mrs. S. H. Patterson of \$3. For a fine device of a basket of artificial flowers, a gratuity was awarded to Miss M. B. Wirt of \$5. For a fine specimen of the century plant, a gratuity was awarded to Mr. J. Smith, gardener to Dr. S. D. Groen, of \$1. For a fine Orange tree, a gratuity was awarded to Mr. Scott Jones of \$1.

FRUIT.—*Apples.*—For the best display of apples, Hobbs & Walker, \$5; for the second best, L. Young, \$3; for the third best, A. Peter, \$2. *Peaches.*—For the best display of peaches, L. Young, \$5; for the second best, J. F. Payne, \$3; for the third best, A. Peter, \$2. For the best specimen of peaches, not in the display, a gratuity was awarded to L. Young, for *Grand Admirals* and *White Heaths*, of \$1 each, \$2. Also, for a fine seedling peach, a gratuity was awarded to Lewis Sanders of \$1. *Pears.*—For the best display of pears, L. Young, \$5; for the second best, G. Herr, \$3; for the third best, C. C. Cary, \$2. Messrs. Hobbs & Walker, nurserymen of our county, exhibited twenty-one specimen varieties of splendid pears, from the gardens of Ellwanger & Barry, of Rochester, N. Y. The beauty and excellence of these fine fruits attracted general admiration. *Grapes.*—For the best display of native grapes, E. Seaboldt, \$4; for the second best, A. Peter, \$3; for the third best, C. C. Cary, \$2. Also, a gratuity was awarded to William Kaye, for a fine specimen of a seedling grape, of \$1. *Quinces.*—For the best display of quinces, Dr. Green, \$2; for the second best, J. Finley, \$1. *Plums.*—For the best display of plums, William Kaye, \$3. Figs and pomgranates, of fine size, from several contributors.

WINE.—For the best and only specimen of wine, Mrs. S. H. Patterson, \$3.

VEGETABLES.—For the best Irish potatoes, G. Heinsohn, \$2. For the best sweet potatoes, A. Peter, \$2; for the second best, A. Peter, \$1; for the third best, G. G. Hikes, 50 cents. For the best celery, Wm. Latimer, \$1. For the best carrots, Wm. Latimer, \$1. For the best parsnips, Wm. Latimer, \$1. For the best cabbage, Wm. Latimer, \$1. For the best egg plant, Wm. Latimer, \$1. For the best cymblings, Wm. Latimer, \$1. For the best beets, G. G. Hikes, \$1. For the best sugar beets, the specimens of which weighed 21½ pounds, a gratuity was awarded to L. Young of \$1.

Five specimens of Picola lemons, from Mrs. L. Young, and splendid specimens of preserved fruits, from Mrs. George Hancock, called forth the admiration of the committee.

A. G. MUNN, *Secretary.*

MICHIGAN, PENNSYLVANIA, AND INDIANA STATE FAIRS.—We learn that these Fairs were very successful, but as yet we have received no list of the premiums awarded.

NORTH-WESTERN CONVENTION OF FRUIT GROWERS.—The above mentioned Convention held its third annual session at Chicago, Ill., from the 4th to 7th last month (October.) Dr. KENNICOTT presided, and it was well attended. Some fifty contributions of fruit were exhibited, which were well grown—large in size, very fair, and almost entirely free from blemish. I did not expect to find such fine specimens, and if the *quality* of winter fruits corresponds with the size, then the West and North, with portions of the South, can boast of as good as we grow at Rochester and hereabouts. Illinois, Indiana, Wisconsin, Ohio, Michigan, and New York States, with Iowa territory, were represented by a class of earnest and intelligent men, whose discussions, when published, will be found of value.

I took particular pains to learn the varieties of apples most esteemed, and quote those in their season:

Fall Apples.—Maiden's Blush, Fall Wine, Porter, Monarch, Rambo, Jersey Sweeting, Fameuse, Fall Pippin, St. Lawrence, Hoss Apple, and Cooper.

Winter.—Swaar, Esopus Spitzenburgh, Rawles' Janet, Jonathan, Baldwin, Newtown Pippin, Vandervere, Roxbury Russet, Pomme Grise, Yellow Bellflower, Winter Pearmain, Rhode Island Greening, Talman Sweeting, Belmont, Dominie, Black Detroit.

Having taken specimens for exchange, I brought some fine apples home with me, which have been universally admired. Specimens of the *Northern Spy*, grown by Looms & Co., of South Bend, Ind., and Mr. Ewing, of Burlington, Iowa, compare favorably with the fine ones grown in our own region. The *Wagener*, also shown by Looms & Co., was equal to ours in appearance. I have never seen so fine specimens of *Rambo*, and it being a favorite with me I am to have a quantity for trial: so also of the *Rawles' Janet*, which is the highly esteemed Ohio apple. Specimens of *Coe's Golden Drop* and *Jefferson* plums, with nectarines, and figs were upon the tables, rather out of season, but of large size. Large peaches of several varieties were shown from Iowa, but I did not taste them.

Being one of the committee on seedling apples I helped to examine over one hundred different specimens, and could not but regret that so few could be called of any value.

Pears of the *Flemish Beauty*, *Duchesse d'Angouleme*, *Seckel*, *White Doyenne*, or *Virgalieu*, and *Steven's Genesee*, and many foreign kinds were shown. They all appeared well, except some *White Doyenne*, which were spotted and not as fair as those of Western New York.

I was well satisfied with my visit to this (to me) new country, and was surprised at the rapidity of its growth. Michigan produces fine fruits in some parts of the State, and at Detroit, at HUBBARD & DAVIS's, and also at Mr. ADAIR's—both nurserymen—we found and ate as good *President* and *Red Cheeked Malocoton* peaches as we ever saw. The first named is one of the very best fall peaches. At Detroit are the celebrated Pear trees planted by the early French settlers, which have attained a large size. They bear plentifully a tolerably fair and early fruit, shaped much like the *White Doyenne*; and some grafted by Mr. ADAIR produced fine specimens, which carried off the premium at the Michigan State Fair this fall.

At Mr. A. E. BAUSH's private garden in Detroit, we were shown the first California grapes grown in Michigan. Mr. ANGEL, his gardener, was so kind as to allow us to test them, and gave us its history. The vine was planted in a large tub, and grown under glass; and in its appearance was much like the *Sweet Water* in its wood and leaf, but not hardy. Fruit colored like the *Catawba*, growing this season in clusters of a pound or more in weight, not compact, but straggling. It is very sweet, and without flavor very like the *Sweet Water*. I did wish it could have been a better fruit. It is likely from the novelty of the thing to have a "run," and Mr. ADAIR had secured quite a number of cuttings.

We went into MIXEN & Co.'s grounds, and although their gardener, Mr. PUGH, was suffering from the ague, he went to point out their Pear trees, which were looking well of one season's growth. A *Vicar* of *Winkfield* tree was showing splendid specimens of that variety. Such *Vicars* any one would be glad to put into cellars, barreled for winter days or evenings.

We felt that our friend BARRY ought to have been at Chicago to meet so many who wanted to see the new editor, but I may be allowed to tell him that the *Horticulturist* stands high with the cultivators of fruit at the West. I shall expect to see a large show of fruit at the next Convention to be held next year at Boston by the enterprising cultivators of the prairie world.

One word about the vegetable productions of Illinois. The sweet potato grows very large and of tolerable good quality, and some of them were enormous. Vegetable eggs and turnips, as well as cabbages and the common potatoes, do well. J. H. WATTS.—Rochester, N. Y.

THE Fall Exhibition of the Monroe Agricultural Society and Genesee Valley Horticultural Society combined, was held in Rochester on the first of October. The show of fruits was large and fine—one of the best we have ever seen here. Superb collections of apples were shown by Messrs. G. H. CHERRY & Co., of Irondequoit; O. J. RYAN & Co., CHARLES POWIS, and JOHN DONELLAN, of Greece; and Messrs. N. & E. S. HAYWARD, of Brighton. Mr. McNAB, gardener to JOHN GREIG, Esq., of Canandaigua, made a fine show of foreign grapes, both from the open ground and the vinery. H. P. NORTON, Esq., contributed a small but beautiful collection of pears—some *Glout Morceau* surpassed any thing of the kind we have seen. *Beurré Diel*, *Gray Doyenné*, *Henry IV.*, and *Duchesse d'Angouleme*, were all remarkably large and fine. AUSTIN PINNEY, Esq., of Brockport, exhibited eight varieties of beautiful pears; H. G. WARNER, Esq., of Rochester, a fine small collection. LEVI A. WARD, Esq., a dish of extraordinary *Sheldon* pears, most of them, we should think, full three inches in diameter. JAMES VICK, Jr., very large and beautifully colored *Louise Bonne de Jersey*, *White Doyenné*, *Duchesse d'Angouleme*, from trees but one year planted. Superb quinces were shown by C. F. CROSMAN, CHARLES POWIS, SAMUEL HAIGHT, and others. ELLWANGER & BARRY exhibited one hundred and eighteen select varieties of pears, and a collection of foreign and native grapes. A few dishes of peaches were shown, but it was too late except for such as *Crawford's Late*. We observed several dishes of these, but they were generally small.

It was too late for a fine display of flowers. Messrs. FROST & Co., exhibited a collection of pot plants; WM. KING a nice collection of Dahlias and Roses; Messrs. RYAN & Co. a collection of Dahlias and fine hand bouquets; ELLWANGER & BARRY a small collection of new Dahlias, and a collection of Roses, Phloxes, and Verbenas. Bouquets and floral ornaments were contributed by Hon. A. WORDEN, of Canandaigua, Mrs. H. P. NORTON, of Brockport; ROBERT W. HANDY, of Rochester; and Mrs. FITCH, of Riga. JAMES VICK, Jr., presented some fine Asters, Balsams, and Ten-Week Stocks in pots.

Good collections of vegetables were shown by JOHN DONELLAN, GIDEON LANE, THEO. BACKUS, and C. F. CROSMAN. Among them we observed fine sweet potatoes, egg plants, Lima beans, monstrous squashes, excellent corn, cabbages, &c. Mr. VICK showed a few nice heads of Paris cauliflower, and fine Mexican potatoes, and other varieties.

The show, on the whole, was good, and attracted a very large number of visitors; but there was a very evident and annoying lack of order and arrangement that was a serious drawback. Our exhibitions are all becoming intolerable in this respect. A very interesting and instructive address was delivered by JOHN DELAFIELD, Esq., President of the new Agricultural College at Geneva. The following are the awards of horticultural premiums:

GRAIN AND VEGETABLES.—Best barrel of wheat, J. P. ROSS, Ogden, Sil. Med. Discretionary premium on one basket, name not given, Vol. Trans. Best barrel corn, N. & E. S. Hayward, Rochester, Sil. Med.; second best, G. W. Goodhue, Wheatland, Rural New Yorker, 1854; third best, premium on two baskets corn, A. R. Olney, Henrietta, Vol. Trans. Best and greatest variety of vegetables, raised by exhibitor, C. F. Croeman, Rochester, Colored Horticulturist; second best, N. & E. S. Hayward, Rochester, Plain Horticulturist. Best vegetable eggs, James Candle, Greece, Genesee Farmer. Best half peck Lima beans, Gideon Lane, Mt. Hor, Plain Horticulturist. Best

two Cauliflowers, J. Vick, Jr., Rochester, \$1. Best nineteen ears sweet corn, Gideon Lane, Mt. Hor, \$1. Largest squash, J. Donellan & Nephew, Hanford's Landing, \$1. Largest pumpkin, Geo. Swift, Clarkson, Vol. Trans. Best watermelons, Francis Hamilton, Rural New Yorker. Best squashes, S. P. Dewey, Rural New Yorker. Best beets, C. F. Crozman, Vol. Trans. and \$1. Best carrots, C. F. Crozman, Vol. Ina and \$1. T. Backus, Rochester, nice lot vegetables, Vol. Trans. and \$1. The committee would highly commend the early short-horn French carrots, exhibited by J. Vick, Jr.

HONEY, SUGAR, AND BREAD.—Best honey, Geo. C. Smith, Clarkson, \$2; second best, Geo. Swift, Clarkson, \$1; third best, S. Shepherd, Pittsford, Vol. Ina. Best sugar, Mrs. A. Fitch, Riga, \$3; second best, J. C. Howes, Sweden, \$2. Best three loaves white bread, Geo. Swift, Clarkson, \$2; second best, Ira Bellows, Pittsford, \$1; third best, Samuel Haight, Vol. Trans. Best brown bread, Geo. Swift, Clarkson, \$2; second best J. P. Young, Sweden, \$1; third best, J. Riley, Brighton, Vol. Ina. Other nice samples of white bread were presented, which do credit to the skill of the exhibitors. The committee would gladly have awarded all a premium, but the society limits would not allow it.

FLOWERS.—*Nurserymen's List*.—Best display of green-house plants, A. Frost & Co., Dip. Best two round hand-boquets, C. J. Ryan & Co., \$2; second best, J. Donellan & Nephew, \$1. Best two round table-boquets, J. Donellan & Nephew; second best, A. Frost & Co., \$2. Best two flat boquets, A. Frost & Co., \$2; second best, J. Donellan & Nephew, \$1. Best display of Dahlias, correctly named, C. J. Ryan & Co., Dip. Best twenty-four varieties named, Ellwanger & Barry, \$3. Best twelve do., Wm. King, \$2. Best six do., A. Frost & Co., \$1. Best and greatest collection of Roses, correctly named, Ellwanger & Barry, Dip.; second best, A. Frost & Co., \$3. Best eighteen varieties Roses, Wm. King, Dip. Best collection of Phloxes, Ellwanger & Barry, \$3. Best collection of Verbenas, Ellwanger & Barry, \$2; second best, J. Donellan & Nephew, \$1. The committee regret there was no competition in many instances in plants and flowers, many of the articles which took premiums being inferior.

Amateur List.—Best display of Pansies, Mrs. A. Fitch, Riga, \$3. No. 68—best collection of native flowers, \$1. Best two round table-boquets, Mr. H. P. Norton, \$3; second best, R. H. Hardy, \$1. Best six Balsams, Mrs. A. Fitch, Riga, \$1. Best six Asters, J. Vick, Jr., Rochester, \$1. Best collection of annuals, J. Vick, Jr., Rochester, \$3. Best floral ornament, H. A. Worden, \$3; second best, H. J. Greig, Wm. McNab, gardener, \$2. Mrs. Luke Chamberlain, bouquet of dried grapes, \$1. Mrs. James Smith, do., \$1. D. C. Greenleaf exhibited a handsome floral ornament, not for competition.

HORTICULTURAL.—*Nurserymen's List*.—The committee on fruits, owing to the lateness of the hour they were enabled to get to work, and the great crowd of visitors, are not very sanguine in the justness of their awards. They recommend the following premiums: Greatest number of varieties of apples, best grown and named, Chas. Powis, Greece, Sil. Med.; second do., Cherry & Co., Irondequoit, \$3; third do., J. Donellan & Nephew, Greece, \$2; fourth do., Ellwanger & Barry, Rochester, \$1. Greatest number of varieties of peaches, J. Donellan & Nephew, Greece, Sil. Med.; second do., J. J. Thomas, Macedon, \$2. Best grown and greatest number of varieties of pears, Ellwanger & Barry, Rochester, Sil. Med.; second do., Chas. Powis, Greece, \$3; third do., J. Donellan & Nephew, Greece, \$2. Best basket of assorted fruits, Charles Powis, Greece, \$3. Best dish of pears, Ellwanger & Barry, \$3. Best dish of apples, J. Donellan & Nephew, Greece, \$2. Best dish of quinces, J. Ryan & Co., Greece, \$1. Best collection of grapes grown under glass, Ellwanger & Barry, Rochester, \$3. Best bunch do., Ellwanger & Barry, \$1. Best collection of grapes grown in open air, Ellwanger & Barry, \$3; second best, Cherry & Co., Irondequoit, Vol. Trans.

Amateur List.—Greatest number of varieties of apples (44), H. H. Brown, Greece, Sil. Med.; second do. (38), N. & E. S. Hayward, Brighton, \$3. Greatest number of varieties of pears, best grown and named, H. P. Norton, Brockport, Sil. Med.; second do., A. Pinney, Clarkson, \$3; third

do., H. G. Warner, \$2. Greatest number of peaches best grown and named, N. & E. S. Hayward, Brighton, Sil. Med.; second do., R. H. Brown, Greece, \$2. Best basket of assorted fruits, N. & E. S. Hayward, Brighton, \$3. Best dish pears, H. G. Warner, Rochester, \$3. Best dish apples, R. H. Brown, Greece, \$2. Best grapes grown under glass, John Greig, Canandaigua, \$3. Best grapes grown in open air, John Greig, Canandaigua, \$2; second best, H. G. Warner, Rochester, \$1; third best, C. F. Crossman, Rochester, Vol. Trana. Best collection of grapes grown in open air, John Greig, Canandaigua, \$3; second best, N. & E. S. Hayward, Brighton, Vol. Trana; third best, C. F. Crossman, Rochester, Vol. Trana. Best basket quinces, Samuel Haight, Henrietta, \$1.

CAYUGA COUNTY HORTICULTURAL SOCIETY.—The exhibition of the Cayuga County Horticultural Society took place yesterday (Sept. 20th) afternoon and evening in Stanford Hall. The arrangements of the exhibition were such as to give a good display of all the articles sent in for competition or show. The varieties of flowers, fruits, and vegetables were numerous, comprising, in the fruit line, apples, peaches, pears, quinces, plums, nectarines, and grapes, in their varieties. Of the vegetables, which were of the finest kind, we noticed beans, peas, beets, carrots, onions, celery, tomatoes, cabbages, cauliflowers, potatoes, squashes, pumpkins, turnips, cucumbers, green corn, and sweet potatoes, together with several varieties of melons. In the display of flowers, great taste was exhibited in the arrangement of them so as to show the varieties of Dahlias, Verbenas, German Asters, Phloxes, Petunias, and other flowers of the season. The display of bouquets and floral designs was certainly a rich sight, combining with artistic skill all the variegated hues of color. Among the floral designs we noticed a beautiful wheel and a star, formed tastefully with flowers and evergreens, and under these was a floral temple admirably designed, which was the observed of all observers. Several pyramids of flowers, and numerous large flat and round bouquets, were to be seen, evincing no ordinary taste in their arrangement. The whole floral exhibition far surpassed in richness the June fair of the Society. We had no means of ascertaining the number of varieties of fruit; there were, however, several kinds of pears and apples, peaches and plums. As curiosities, among the grapes we noticed a piece of vine, extraordinarily prolific, on which we counted sixty bunches. Among the vegetables there were many of mammoth size: a tomato as big as a child's head, and seed cucumbers as large as usual watermelons. There were potatoes raised from the seed, a bearing orange tree, with the fruit partly turned yellow, a stalk of corn 16½ feet in length, and species of Dutch turnip that grows out of the ground, together with curious looking muskmelons, odd shaped squashes, and enormous cabbage heads. To the ladies of the committee of arrangements much praise is due for their admirable taste and skill in the floral designs and general arrangement of the flowers, which seemed to attract the crowd of visitors. Although the weather for the last two days had been one continual storm, yet yesterday came off with a beautiful day, as if Nature designed to smile on the efforts made to exhibit her beauties and bounties. The exhibition was well attended both in the afternoon and evening, particularly the latter, when there was a perfect "jam," feasting their eyes on the luscious specimens of fruit, and the rich displays of the floral kingdom, while vegetarians looked with admiration on the array of kitchen edibles. On the whole, this second exhibition of our Horticultural Society has come off with credit and honor to all those engaged.—*Auburn Daily Advertiser*.

PENNSYLVANIA HORTICULTURAL SOCIETY.—AD INTERIM REPORT OF THE FRUIT COMMITTEE FOR SEPT.—The Fruit Committee respectfully report, that since the August meeting of the Society, several interesting collections of fruits from various localities have been presented for their examination:

FROM PASCHAL MORRIS, of Westchester.—Two specimens of a pear, from an old farmer near Westchester. Size above medium, 2 13-16 inches long, by 2½ broad; obtuse pyriform; greenish-yellow, with some russet markings, especially at the insertion of the stem, and a faint salmon

check; stem 1 inch by 1-8, inserted somewhat obliquely in a small superficial cavity, russeted, and slightly plaited; calyx in a shallow basin, sometimes russeted; seed rather large, dark, flat; flesh of fine texture, buttery, melting; a little more flavor would be desirable; quality at least "good."

From AMOS L. WHITMAN, North Coventry, Chester county, Penn.—Three varieties of Seedling Plums:

1. Fruit an inch and a half long, by one and a half broad; obtuse cordate, suture indistinct; red with a white bloom; stem five-eighths to three-fourths of an inch long, by one-twelfth thick, inserted in an open, moderately deep depression; flesh unadherent to the stone, of pleasant flavor, and "good" quality. This variety appears to be wonderfully productive; a twig three inches long by one-sixth thick, contained eight plums—another two inches long by one-fourth thick, contained seven.

2. Fruit an inch and a half long, by one five-sixteenths; obovate; purple, covered with blue bloom; stem eleven-sixteenths by one-sixteenth; quality inferior, except for culinary purposes.

3. Only one specimen—large, one three-fourths by one eleven-sixteenths inches; roundish obovate; greenish-yellow, mottled and dotted with white; suture broad, extending on one side from the base to the apex; stem three-fourths by one-twelfth, inserted in a slight depression; stone partially adherent. The specimen being pulled somewhat prematurely, a correct estimate of its merits could not be formed. We are, however, inclined to think favorably of it, and should be happy to see specimens of it next season.

From THOMAS HANCOCK, Burlington, N. J.—Three boxes containing specimens of a plum, and thirty-seven varieties of pears:

1. *Drap d'Or d'Esperin*—A small, round, golden-yellow plum, with occasionally a few crimson dots; stone unadherent; quality "very good."

2. *Cabot*—Specimens too much decayed to judge of its quality.

3. *St. Ghislain*—In good condition; "very good."

4. *Cumberland*—Of fine size, but in quality "scarcely good."

5. *Muscadine*—"Good."

6. *Bourré Goubault*—"Good."

7. *Dillen*, or *Doyenné Dillen*—Of large size and fine appearance, similar in form to the *Hosm Schenk*; three and three-eighths inches long, by three and one-fourth broad; round, obovate; greenish-yellow, with spots and splashes of green russet; stem from three-fourths to one inch long, by one-fifth of an inch thick, rather fleshy at its insertion; little or no cavity; calyx open, set in a wide, shallow, sometimes russeted basin; seed ovate, brown, medium; flesh buttery, flavor pleasant; quality "very good." In the London Horticultural Society's Catalogue, and in *Downing's Fruit and Fruit Trees of America*, *Dillen* is given as a synonym of *Bourré Diel*. We regard it, however, as a distinct variety, ripening earlier than the latter.

8. *Washington*—A favorite pear with us—attractive in appearance, and of "very good" quality.

9. *Copia*—A very large, handsome, Pennsylvania variety, of "good" quality when eaten at the exact moment of its maturity.

10. *Great Citron of Bohemia*—Scarcely worth cultivating

11. *Golden Bourré of Bilbao*—Fair, and "very good."

12. *Urbaniste*—"Best."

13. *Heathcot*—"Very good."

14. *Belle et Bonne*—"Good."

15. *Marie Louise*—Specimens not being fine, the quality was only "good."

16. *Onondaga*—Inferior specimens; quality only "good."

17. *Capshen*—"Good."

18. A seedling from the *Sackel*—Originated with Mr. WM. W. KING, of Burlington, N. J.

Small roundish-obovate; uniform yellow russet; stem five-eighths of an inch long, by one-eighth thick, fleshy at insertion; no cavity; calyx nearly closed, set in a superficial basin; quality inferior to the *Seckel*.

19. *Beurré d'Anjou*—"Best."

20. *Adele de St. Denis*—A new Belgian variety; quality "good."

21. *Fondante d'Automne*—High flavored and delicious; quality "best." This variety has recently been extensively imported under the name *Seigneur d'Esperin*.

22. *Bon Crétien Fondante*—"Very good."

23. *Fulton*—"Good."

24. *Super Fondante*—Specimens small; "good."

25. *Gendeschheim*—Scarcely "good."

26. *Vallee Franche*—Quality indifferent.

27. *Napoleon d'Hiver d'Esperin*—Decayed

27. *Sullivan*—Scarcely "good."

The following ten kinds were not in eating condition: *Althorpe Crassane*, *Buffum*, *Flemish Beauty*, *Colmar Neil*, *Jean de Witte*, *Beurré Diel*, *Bezi de la Motte*, *Josephine*, *Figue de Naples*.

From SAMUEL OTT, Montgomery county.—Two varieties of pears and fine specimens of a plum:

1. *Bartlett*—Large, handsome; "very good."

2. *Lodge*—Specimens remarkably fine, three and a half inches long by three broad, possessing the rich, vinous flavor of the *Brown Beurré*; quality "very good."

3. A large red plum, one and three-fourths inches long by one and three-fourths broad; oblong; light red; suture extending on one side from the base to the apex; stem three-quarters of an inch long by one-twentieth thick; flesh partially adherent to the stone; quality "very good."

From ROBERT BURN.—Specimens of two pears and one apple:

1. A supposed seedling pear, bearing some resemblance in form and flavor to *Henry IV.*—rather small, two and one-eighth inches long by one and one-eighth broad; obovate-pyriform; yellowish-green, with large green russet spots and blotches, and a brownish-red cheek; stem broken; fleshy at its termination; inserted without depression; calyx closed, set in a shallow, furrowed basin; seed small, black; flesh melting, buttery, of fine texture; flavor vinous; quality "very good."

2. *Doyenne Robin*—Rather large, two and a half inches by two and three-quarters round, bergamot shaped; greenish, covered with russet spots and splashes; stem usually very long and thick, from one and a quarter to two inches long by one-sixth thick, inserted in a deep, narrow cavity; calyx small, set in a narrow, moderately deep basin; seed large, black; flesh melting, somewhat granular; flavor pleasant; quality "very good."

3. *Fair Maid Apple*—The only specimen on the tree; rather large, roundish-oblate, inclining to conical, beautifully and delicately striped with carmine; flavor sub-acid; quality inferior.

From WM. G. WARING, Boalsburg, Center county.—A box of fruit containing specimens of fifteen varieties, three of pears, four of apples, and eight of plums.

1. The *Julienne*—Mr. WARING says this variety was introduced into Center county from Germany, as the *Summer Bon Crétien*. The specimens were very fine, and quality "very good."

2. *Summer Bon Crétien*—Cultivated at Boalsburg under the names of *Sugar* and *Honey* pear; flavor very saccharine, but of inferior quality.

3. *Dearborn's Seedling*—Very handsome specimens, and of "very good" quality.

4. The *Sink Apple*—Mr. WARING informs us that this native red apple "originated on the farm of the Hon. GEORGE BOAL, of Boalsburg. The original tree, which is now dead, stood over a cavern into which a stream emptied: hence the name. It was famous for its constant and abundant yield of fruit, which was in great demand for cooking, and continued in use from July to October." Specimens, when received, were entirely decayed.

5. The *Summer Bellflower*—Considered, in Center county, a superior early baking apple, and in season the last of July and August—also entirely decayed when the box was opened.

6. The *Royal Sweet*—A large "good" sweet apple, which is apt to fall from the tree.

7. The *Bush*—A native apple on the farm of CHRISTIAN DALE, near Boalsburg, and found growing in the woods by his father. Mr. WARING says this variety is "an excellent bearer, and a great favorite in an orchard of choice sorts." Size two and three-quarters by three inches; oblate, inclining to conical; greenish-yellow, with many russet dots near the crown, and occasionally a faint blush; stem seven-eighths of an inch by one-ninth, inserted in a deep, open, furrowed cavity; calyx very small, set in a deep, narrow, plaited basin; seed brown, broad, short; flavor pleasant; quality "very good."

8. *Early Yellow Prune*—Said to have been obtained from Bedford county, many years ago, and is represented as being "a free grower, prodigious bearer, and not apt to rot." Size one and five-eighths inches by one and one-quarter; oval, pointed at each end; stem five-eighths of an inch long, by one-twentieth thick; flesh free from the stone; flavor delicious; quality "very good."

9. *Red Prune*—Also introduced into Center county from Bedford. This variety was sent on a former occasion from Lancaster, under the name of *Bottle Plum*. Two inches long, by one and one-eighth broad; pyriform, with a long slender neck; suture extending on one side from the base to the apex; pale red; stem one inch long by one-sixteenth thick; a handsome plum of peculiar form and "good" quality, but said to be an indifferent bearer.

10. *Imperial Gage*—Mr. WARING remarks of this variety, that "the tree is very free from leaf blight, and the fruit from rot, hanging long, shriveling, and becoming very sugary." Specimens fine; quality "very good."

11. A very large, late purple plum, resembling *Duane's Purple*, and said to be "a very excellent grower, a full bearer, and not inclined to rot;" very large, two inches long by one and thirteen-sixteenths broad; oblong; purple; stem three-quarters of an inch long by one-twelfth thick; flesh free from the stone. Specimens not sufficiently ripe to test their quality.

12. The *Galbraith*—An early plum, said to have originated with the late Mr. GALBRAITH, near Boalsburg, and is represented as being a straggling grower, but the best early plum cultivated in that vicinity. An inch and a half long by one and five-sixteenths broad; oval; purple; stem five-eighths of an inch by one-fourteenth; flesh tender, juicy, adherent to the stone; flavor luscious; quality "very good," if not "best."

13. *Prune Damsen Plum*—One and a half inches long, one and three-sixteenths wide, one and one-sixteenth thick; flattened oval; blue; stem one and a half inches long by one-eighteenth thick; flesh rather dry, entirely free from the stone; flavor agreeable; quality "good."

14. *Coe's Golden Drop*—Received from England for the *Magnum Bonum*; specimens large and fair, but not mature.

15. A variety cultivated in the neighborhood of Boalsburg, as the *Peach* plum, from which it differs in several particulars. Large, one and three-quarters inches by one and nine-sixteenths; oblong; salmon colored; stem three-eighths of an inch by one-fourteenth; stone adherent, long-ovate, one and one-sixteenth inches long, five-eighths wide, and seven-sixteenths thick; of pleasant flavor; quality between "good" and "very good."





Manures and Manuring.



OW to prepare and apply manures is a matter in which every cultivator of the soil must feel deeply interested. It matters not to what expense and trouble we go to procure the finest fruits or vegetables, and the most beautiful trees, shrubs, and flowers; or with what excellent taste we may arrange our parterre; unless we furnish the soil with such quantities and kinds of fertilizing materials as will ensure a vigorous, luxuriant, and healthy growth. The agriculturist may stock his farm with the purest and best blood of animals that the world can produce, or he may plant the best improved grains and grasses or root crops that money will purchase; but without judicious and liberal feeding in the one case, and skillful, thorough culture in the other, he will be no better off in the end than his neighbor, who has remained satisfied with such stock and such seeds as he could most easily and most cheaply procure. This every one will cheerfully admit in theory, but a great many deny it in their practice; and thus the obstinate opposers of improvement and progress have been furnished with their strongest arguments. Here, they say, are Mr. BROWN and Squire JONES, who have spent fortunes in collecting new and fine things from all parts of the world—they have every known variety of fruit and flowers—they have employed celebrated gardeners to lay out their grounds, and have spent thousands upon labor; and what have they? Why, they have to come over here to us and purchase a supply of fruit for their families; and the old lady across the way, whose garden is a mere patch, and who does all her own work, can show more and finer flowers than they can any day in the year! This is not an imaginary case; we have repeatedly heard these remarks, and had occasion to regret the pernicious influence of such examples. On the other hand, we could point to instances where a single example of a small garden successfully cultivated, has awakened an entire village and neighborhood, and set them at planting and gardening with the greatest enthusiasm—and upon the right principle.

One of the very first matters that should occupy the attention of persons embarking in horticulture, whether on a large or small scale, should be the preparation of his soil. This ought to be the starting point; and there is probably no other item in the entire routine of culture in regard to which beginners find themselves so puzzled, or so completely in the dark. If every crop and every soil could with propriety be furnished with the same quantity and kind of manures or fertilizers, it would be a simple matter; but such is far from being the fact. What may be fit and proper for one soil and one sort of crop, may be utterly ruinous to others; and therefore a great degree of judgment and discrimination becomes necessary. Much may be gathered from the instruction of books and the experience of others; but local circumstances, apparently trivial, exert such a weighty influence that nothing save actual experience

with our own soils can afford an unerring and perfectly reliable guide. This we have found true in our own practice. We have no hope, therefore, in being able to write anything that every man may carry out to advantage, and will merely aim at directing attention to certain well established facts and principles that may aid in putting the inexperienced on the proper course.

One great error, and, as we believe, a very prevalent one, is that of applying the same kind of manure to the same soil for a great number of years in succession. We will take, for instance, town and village gardens, and see how the case is with them. A cow and a horse, and perhaps a pig, are kept on the premises, and whatever manure they may produce, or such a quantity of it as may be considered necessary, is annually applied to the garden without any admixture of other material, and, in most cases, without being very properly prepared beforehand. At the same time, the ground is cropped with the same articles year after year with very slight variations. By and by the crops begin to fail; and the wonder is *why*, with such a liberal manuring every year. But it is not at all wonderful. We have seen lime, marl, sea-weed, and other fertilizers produce the most abundant crops for a few years, and then cease to have any good effect, but rather to be injurious. Thousands of gardens are defective, not from the want of manure, but from the too-frequent application of one material. People are not thoughtful or careful enough in saving the waste materials of gardens and kitchens to add to the manure heap. The more vegetable refuse that can be returned to the garden, the less will strong animal manures be needed. Leaves, the dry stalks and waste parts of vegetables, weeds, mowings and sweepings of lawns, prunings of trees, clippings of hedges, if thrown in a heap and mixed with a little manure, lime, turf from an old pasture, muck, or peat, &c., would make one of the very best composts for gardens, whatever might be the character of the soil or the crops grown on it. They return to the soil the very same substances of which it has been deprived by crops, together with others taken from the atmosphere. Such a compost is far preferable to strong stable manure, for trees especially, and may be applied with entire safety even in fertile soils, where it might be considered that manure of any kind was wholly unnecessary. The finest garden crops, and the most vigorous, healthy, and fruitful trees we know of, are those of poor cottagers who keep no animals and have no manure, but such as they scrape up in the form of refuse. Their necessities compel them to follow a system of preparing manure that every one should adopt from choice. A dressing of wood-ashes occasionally is of great value. The alkali they contain is not only useful to the soil, but destructive to grubs that infest it. Soot is also valuable in this respect, and it is a point of some importance; for when animal manures alone have been plentifully applied for a number of years, grubs become so numerous as to render the garden nearly worthless. The best way to apply these substances is, to spread them over the ground in the fall or winter, and spade them under; before spring comes they are rendered perfectly harmless. Bones, either in a fresh state or from the glue factory, make a valuable application to gardens, and especially to fruit trees. If ground to a powder, or dissolved in sulphuric acid, they produce an immediate effect; but if simply broken in pieces, or spaded into the

ground, they have a gradual and permanent effect. In taking up trees from soil where bones have been used as manure, we find every particle within reach of the roots completely enveloped in masses of fibres. Guano, superphosphate of lime, and other prepared manures, are becoming extensively used, and will be advantageous to persons who have extensive grounds to enrich, with limited means of procuring or making manure. Those who have but small gardens have the means of making all the manure they require, and that, too, of a kind which we would prefer either to guano or any of the patent manufactured compounds.

The manner of applying manures and the time to do it require careful consideration. In this country, where we have excessive heat and often excessive drouth in summer—and that, too, at an early period of the summer—solid manures and composts of every kind should, as a general thing, be applied in the autumn; so that during winter and spring they may be dissolved and fitted to yield nutriment to plants when active growth commences. Every experienced cultivator knows that to have a good crop, or a good growth, it must be made early in the season; and therefore the supply of nutriment should be ready in abundance when growth commences and the greatest activity prevails. Solid manures applied in the spring will probably remain dry and useless all summer—and, indeed, are more likely to prove injurious than otherwise. There are, of course, exceptions to this in the case of certain garden crops of succulent nature, that may with advantage be stimulated with fresh hot manures in connection with a liberal supply of moisture. One of the best methods of maintaining the soil around trees in good condition is to apply every autumn a top dressing of compost. The snow and rains of winter and spring dissolve and wash down its most soluble parts, and place them within reach of the roots by the time they are ready to take it up. At the same time this top dressing affords protection to the roots against the changes of temperature during the winter and spring months. There is, to be sure, some loss in this way of using composts, as a considerable portion is lost by evaporation; but its advantages are a sufficient offset.

In preparing and applying manures our aim should be *first*, to have it adapted, as nearly as possible, to the nature of the crops to be grown and the defects of the soil. *Second*, it should be applied in such quantities as the soil and the plants may require. There are certain garden crops that can scarcely be over-fed, while fruit bearing trees and many flowering plants may be ruined by excessive stimulants. *Third*, it should be applied at such seasons as will place it in proper condition to yield the largest amount of nutriment during the early periods of growth. These are the main points, and a volume might be written upon them. Our remarks now are merely intended to draw special attention to their importance.

CHERRIES.

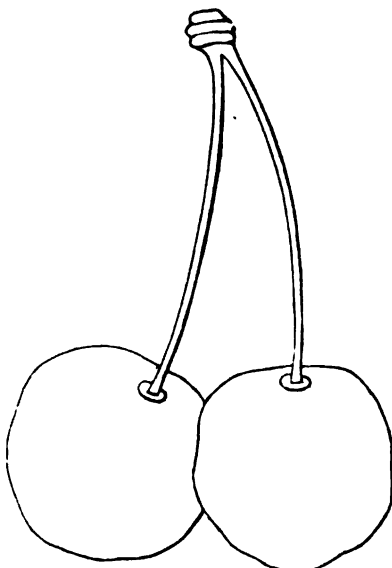
THE Cherry is a highly popular fruit in this country—planted much more extensively, we think, than it is elsewhere. One reason for this is, that the Heart and Bigarreau varieties are generally rapid growing, beautiful trees; and are, on that account, regarded as being suitable for fruit gardens and door-yards, where shade and ornament are sought for as well as fruit. Another reason is, that it thrives and bears well in a great variety of soils and situations, and over a very large portion of the country. A third and very strong reason for its general cultivation is, that it ripens early, while fruit is scarce; and forms a cooling, healthy, and agreeable dessert in the warmest weather of the year. On all these accounts, as well as others, the cultivation of the Cherry has assumed an importance here that it never has in any other country. We might be safe in saying that one nursery in the State of New York grows and sells more Cherry trees in one season than the whole of England or France.

The most extensively grown varieties are still of foreign origin, such as the *Black Tartarian*, *Black Eagle*, *Yellow Spanish*, *Elton*, *Knight's Early Black*, *Napoleon Bigarreau*, *Early Purple Guigne*, *May Duke*, *English Morello*, &c. Among those of American origin the *Downer's Late Red* has, no doubt, been the most widely disseminated, and it may be justly considered as one of the leading sorts. *Coe's Transparent*, *Burr's Seedling*, *Manning's Mottled*, *Madison Bigarreau*, *Gridley*, *Wilkinson*, *Sparhawk's Honey*, and some others, have been planted but sparingly, and only as a general thing by way of making up collections. Among Dr. KIRTLAND's list of fine seedlings the *Gov. Wood* and *Rockport Bigarreau* have already acquired deservedly a great popularity, and several others of his will be highly prized, we doubt not, as soon as they become known.

The last number of *Hovey's Colored Fruits* has a portrait of a seedling variety, produced by Messrs. HOVEY & Co. It is called the "*Hovey*," and is described as a very large and beautiful amber colored cherry, mottled with brilliant red. Tree vigorous, upright, and pyramidal in its growth, and a profuse bearer. Ripe middle of July to beginning of August. This, according to Mr. HOVEY's description, must be a valuable acquisition. At this rate we shall soon be able to make a very respectable catalogue of American cherries. But what we most want are varieties of the Duke cherries that will bear the climate of the north, and of the south, and west, where the Heart and Bigarreau classes fail. We hope the attention of persons who are experimenting with seedlings will keep this in view. Hardiness is a point of the utmost importance. At the present moment, after all that has been done, we know of no cherry of such universal utility as the *May Duke*.

Among the large quantities of new foreign fruits we have received but a small number of cherries. The *Belle d'Orleans* is an acquisition, being among our earliest sorts, ripening with *Bauman's May* and *Early Purple Guigne*, and being light

colored, is not so much attacked by birds. It is also a very beautiful and delicious fruit. The *Bigarreau Monstreuse de Mezel*,* of which we give a portrait this month, proves to be a large, productive variety; and, as the fruit is firm, valuable for marketing. The tree is a very strong, irregular grower—more so than the *Elton*, or any other variety we know of; and, as far as we have observed, quite hardy. Fruit—very large, larger than *Black Tartarian*, obtuse heart-shaped, with an uneven surface. Stalk—long and slender. Color—dark mahogany. Flesh—firm, somewhat like the *Tradescant's Black Heart*, juicy, and agreeable, though not highly flavored. The fruit is produced in very large clusters. Ripe, at Rochester, latter end of June and beginning of July—usually lasts to the middle of July.



BIGARREAU MONSTREUSE DE MEZEL.

PRUNING AND MANAGEMENT OF THE PEACH TREE.†

IN August last, Mr. F. MALLESON, Gardener to His Majesty the King of the Belgians, at the Royal Gardens, Claremont, having seen M. LEPERE's trees, expressed himself as having been highly gratified with their fine appearance. "There was not," he states, "a blight of any description upon them, and they were loaded with fruit. M. LEPERE's system of training is the best I have ever seen." It has, therefore, been considered advisable to give the following translation of such parts of his work as will enable the horticulturists of this country to understand his system, so much approved in France and elsewhere on the continent. It is certainly desirable that every gardener should know the best French mode of managing the Peach tree, and that he should perfectly understand the principles contained in the following pages, in order that he may turn them to account in improving the trees that are, or may be, committed to his care. That there are in many gardens in this country Peach trees requiring to be improved, is a fact that can not be denied. Errors in management will appear more evident to any one who may read the following paragraphs; but whoever will attentively study the excellent instructions which they contain, must feel assured that he can, in consequence, effect great improvements, not only in the training of young

* See Frontispiece.

† According to the method of M. ALEXIS LEPERE, of Montreuil, near Paris. Translated for the *Journal of the London Horticultural Society* from his work, *Pratique Raisonnee de la Taille du Pecher, principalement en Espaller Carre*.

trees, but also with respect to those that have been already established, under whatever mode of training they may have been conducted.

1. The Peach tree, planted under favorable circumstances, shoots vigorously, and its vegetation is very active from the first fine days in spring till about the middle of October. Such are its vegetative powers, that, during this time, it is continually making fresh shoots which require a constant and judicious superintendence, if we wish to manage properly, and this greatly depends on stopping in time those growths which are not likely to suit our purpose.

2. As soon as the genial influence of spring is felt, the buds swell, and very soon the flowers come out; while the leaves, more backward, are yet within their envelopes. Afterward the leaf-buds open their scales, and the shoots burst forth, to become, the following year, branches of greater or less length.

3. From May to August the leaves, coming successively to maturity, acquire a more compact structure, and consequently absorb less sap. This, continuing to flow, seeks fresh outlets, and produces, at the axil of the leaves, buds which remain as such, or break into laterals, according to the time of their formation, the continuance of fine weather, and the vigor of the tree.

4. These new productions, all formed in the course of the growing season, are easily seen at the fall of the leaf. They are the source from which our hopes of future crops arise; and as it is necessary to know them well, I therefore proceed to explain them in detail.

5. *A. Eyes or Buds.*—These are envelopes containing the rudiments of shoots, leaves, flowers, and fruit. They are conical, and covered with little imbricated scales, more or less coriaceous, and which are merely abortive leaves dried by the air, so as to protect the tender parts which they enclose from the severities of the winter. They continue in this state as long as the flow of the sap is arrested by the cold; and they commence growing when the weather becomes sufficiently warm to put the sap in motion.

6. If the eye does not receive proper nourishment it may remain a long time inactive; it is then called a *latent bud* (œil expectant). It is generally roused from this dormant state by pruning, performed with the view of calling it into action; or naturally, by an increased flow of sap which acts as a stimulus to it; otherwise, it may become completely extinct.

7. Buds become either *wood-buds*, or *fruit-buds*; and it is important for the operations of pruning to distinguish well these two conditions. I may, however, remark, that with reference to the Peach tree, the nature of the bud is never doubtful to an experienced person. In fact, its form, its place, the age of the wood on which it appears, all help to show the function which it is destined to perform; but for those little acquainted with this tree, it is necessary to enter more into detail.

8. *The wood-bud* (Figs. 1, 2, 3, 4, 5, *a*) is an embryo shoot, covered with imbricated scales of a reddish-brown. Its form is usually that of a little cone, more or less pointed; when in the axil of a leaf, it is always slightly compressed. The wood-bud, which is also called at Montreuil *œil de pousse* (pushing-eye), comes on all parts of

the Peach tree, upon the young as well as upon the older wood; and pruning can make it push from very old wood.

9. *Fruit-buds* (Figs. 1, *b*; 2, *c*; 3, *d*; 4, 5, *g*).—This contains the rudiments of the flower. It is also covered with scales; but its form is always rounder than that of the wood-bud. Fruit-buds are only found on one-year-old wood.

10. There are upon the Peach tree buds which are single, double, triple, or more numerous.

11. The single bud is in general a wood-bud, from which a shoot proceeds. We however see flower-buds by themselves; such are those marked *b*, Fig. 1.

Most commonly the fruit-branch that bears them is terminated by a wood-bud, or growing-point, the use of which is to draw into this branch the sap necessary for the nourishment of the flowers and fruits; but it may happen that by accident or abortion this eye does not exist; yet the loss of the fruit may not result. In 1844 I observed numerous instances of this, and further on I shall have to refer to them.

12. Double buds generally consist of a wood bud and a flower-bud. Fig. 2 shows this kind of buds: *a*, wood-buds; *c*, flower-buds.

13. In the triple buds, such as are seen at *d*, Fig. 3, two are flower-buds, the other a wood-bud. There are also triple buds which consist of three wood-buds. But this sort does not show itself except on the shoots of young Peach trees, or on those that are very vigorous. It is always the middle eye that is the strongest; sometimes those at each side die off. I shall state, further on, the procedure adopted in pruning them.

14. Quadruple buds, although they appear as such, have always in the midst of them a pushing-eye that is at first hardly visible, which leads one to believe that it is

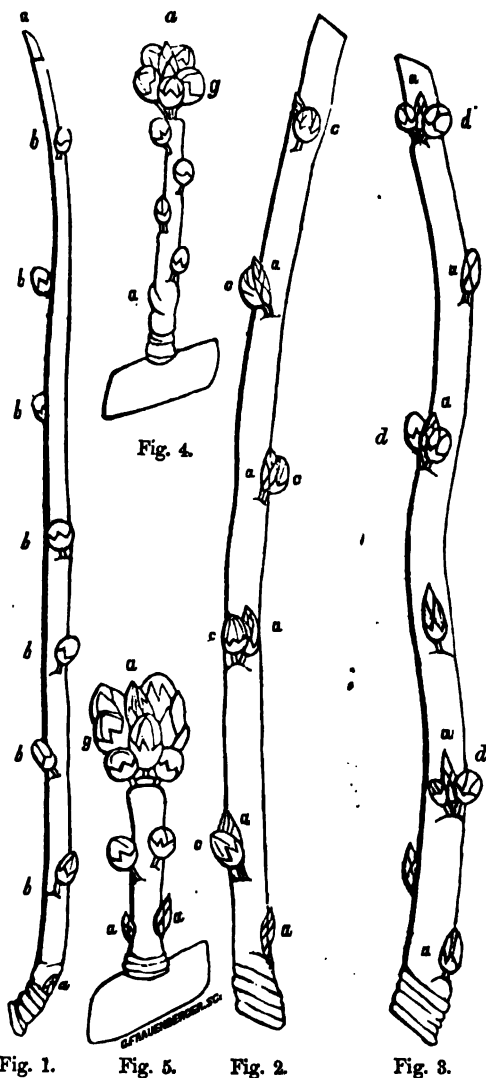


Fig. 1.

Fig. 5.

Fig. 2.

Fig. 3.

absent. The four prominent ones are all flower-buds; but the wood-bud that develops a little later has the same functions as the *œil de pousse*, or growing-point (11); and from its presence these ought to be called quintuple. They are rare, and always at the end of a little branch or spur (Fig. 4). They are sometimes more numerous, and disposed in the same manner with a growing-point in the center (Fig. 5). The growing-point sometimes perishes without bad consequences to the fruit.

15. When no accident occurs to the fruit-bud, there results the opening of the flower, which, after having fulfilled its functions, sets a fruit, of which the growth and maturity successively take place.

16. The wood-bud produces all the woody parts of the tree; these, at first herbaceous, undergo several modifications, of which we must give some account.

17. *B. Of the Young Shoot (Bourgeon).*—The young shoot is the first state into which the wood-bud enters in continuing its growth. At first it is merely a cluster of two or three young leaves, which expand with the small herbaceous stalk that bears them; and a greater or less number of leaves form upon its length in proportion to its growth, which is sometimes very extensive. When the young shoot is vigorous, eyes situated near its point break out during its growth, and give rise to productions which receive the name of *summer laterals*; and which, at Montreuil, we designate *redrugeons*.

18. The young shoot is so called until its elongation for the season is terminated; after that it is termed a *rameau* [by the French; in England the qualification of *young* is no longer applied, and it is merely called a *shoot*].

19. *c. Of the Shoot (Rameau).*—It has been shown that this is nothing more than a young shoot in a more advanced state. Nevertheless, it is still distinguished from the young shoot, not by its strength only, but by the eyes with which it is furnished throughout its length. These eyes are at different distances, according to the vigor of the shoots. The latter vary in length from four inches to six and a half feet.

20. The shoot (*rameau*) preserves its name so long as the buds with which it is furnished remain unexpanded; but as soon as they commence to burst forth, in the following spring, it becomes a branch.

21. The false shoot, or lateral, bears the same relation to the shoot, or young branch, as the summer lateral does to the young shoot. In some respects the false shoot ought to be considered and treated the same as the shoot.

22. I admit but two sorts of shoots (*rameau*), namely: 1st, the wood shoot; 2d, the mixed shoot—that is to say, one for both wood and fruit.

23. *First sort.*—The wood shoot is adapted for the production of wood and leaves only. Its vigor is equally distributed, and the eyes with which it is furnished are of nearly the same size. It abounds in young trees, and occasionally the terminal shoots of older trees are of this description.

The over-luxuriant (*gourmand*), which is a strong shoot of the sort just mentioned, differs from it in its broad base, in its disproportionate growth, in its length, in its thickness, in its grayish bark speckled with brown, and in the distance of its eyes from each other, the lower ones of which are nearly obliterated, while those at the top are

large, drawing all the sap to themselves, and inclined to push out laterals. The over-luxuriant shoot shows a bad circulation of the sap, and is seldom found on any but very young Peach trees, or on those that are badly managed. It is most frequently taken off; but this should be done before it has attained too great a size; still there are circumstances, which I will point out, where it can be made useful by pruning.

24. *Second sort.*—The mixed shoot, as previously observed, is that on which both wood and flower-buds exist.

25. *D. Of the Branch.*—It is now understood that every shoot is, in general, the origin of a branch, on which, by the influence of pruning and the continuance of growth, the buds with which it is furnished break forth. Some of these buds give rise to young shoots only; others to both young shoots and flowers.

26. Hence it follows that, as I only allow of two sorts of shoots (22), I recognise but two sorts of branches, namely: 1st, the wood-branch; 2d, the fruit-branch. I make use of the latter expression because it is usually adopted, although improperly so, as branches bearing fruit only rarely exist on the Peach tree.

27. *First sort.*—The wood-branch is the second state of the shoot, of which all the buds are wood-buds. The first branches that a young Peach tree makes are of this sort, because, being nourished by a strong-flowing and as yet imperfectly elaborated sap, they can not, during the first year of their existence, give rise to any thing but wood-buds, which become successively young shoots, mature shoots, and branches. They afterward remain wood-branches during the life of the tree; and they preserve the power of producing wood-buds at any age, whatever may have been said to the contrary.

I dwell so much upon this fact, because it is hardly admitted; and many persons yet maintain that the Peach tree never forms shoots from the old wood.

Whatever be the mode of training, the wood-branches form the framework of the tree. They receive different names, according to their place; but I will speak of this in treating on pruning, having only to consider here the Peach tree, and the nature of its productions.

28. *Second sort.*—The fruit branch follows the mixed shoot (24), as has been seen, and is always borne by the wood-branches. It is of the greatest importance, for on it all hopes of a crop depend. We also call it at Montreuil the *small branch* (*la petite branche*), from the difference between its size and that of the wood branch. In fact, its thickness rarely exceeds that of a large quill. After having borne fruit it becomes a wood-branch, if not removed by pruning, in order to replace it by another of an age to bear.

29. The fruit-branches, beside their use of producing fine and good fruit, have another that is not without its interest, that of shading from the excessive heat of the sun both the fruit which they nourish and the bark of the wood-branches which bear them, and to which the nearer they are the better they protect.

30. Such is the account that I have deemed necessary to make of the manner in which the vegetation of the Peach tree is carried on. I have thought this necessary, in order to render more intelligible the explanations which I have to give on its pruning

In recapitulating what has been said, we recognise that all growths in this kind of tree commence by an eye or bud; that this eye is either a wood-bud or a fruit-bud; that a wood-bud may be produced on all parts of the tree, even upon those that are oldest; that it successively becomes a young shoot, a shoot, and a wood or fruit-branch; that the flower-bud is not produced on any other than wood of one year old; and that to have fruit for any length of time, we must know how to produce a succession of this young wood.

Lastly, it is doubtless understood that each wing of a Peach tree trained against a wall is the product of an eye of the original tree that has undergone all the changes spoken of.

(To be continued.)

CULTURE OF ASPARAGUS.

ASPARAGUS is one of the most generally esteemed esculents that our gardens produce, and in our climate very easily brought to the highest state of perfection. But how seldom do we see even a tolerably grown article in the markets or on the tables of public or private houses. Nine-tenths of it is about as large as a pen-holder, and as stringy as a hemp rope, instead of being "as thick as the thumb, and brittle as glass." A late number of the *London Gardeners' Chronicle* touches upon this matter, and brings forward clearly and forcibly the main points on which successful management depends. *First*, abundance of manure applied at the proper time. *Second*, preservation of the stems and leaves during the whole season of growth, and, if possible, the prevention of seeding. *Third*, not to cut until the roots have become large and strong, and then to cut only every other year. *Fourth*, to keep the roots near the surface in order to give them full benefit of atmospheric heat, that the growth may be strong and rapid, and therefore green and succulent. Nobody now-a-days thinks of eating the stringy, blanched portion of Asparagus shoots. The article referred to is as follows:

"That information upon this point is needed the poor samples so continually produced at tables where excellence is to be looked for sufficiently indicates. But we are far from thinking that M. COURROIS has exhausted the subject; on the contrary, he misses that which, to private persons at least, is most important—the mode of obtaining the largest and most succulent, and *therefore* the best Asparagus for table.

"Many years ago the manner in which the great Biscayan Asparagus is obtained was pointed out by a most intelligent correspondent in these columns. Some of the details of the Spanish process were, however, unsuitable to English circumstances, and we believe it had never been imitated in this country. Another method by which enormous succulent shoots were obtained in Suffolk was briefly published in the *Journal of the Horticultural Society*. That plan is described in the following words: 'I set out my bed as follows: 60 feet long; 5 feet wide; 4 feet deep. The earth was all taken out and laid on one side the bed. I then placed at the bottom, 2 feet deep salt ooze, from the banks of the Alde; 1½ foot deep of the river weed (a long grass). Two feet of the best vegetable mold

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was then placed on the top, and the young plants set out at 18 inches distance all over the bed.' They were then buried in a few inches of rich soil.

"Leaving the reader to compare this mode of forming a bed with the French and common English methods, we would invite attention to the following considerations, which greatly concern gardeners, now that the season of forming *Asparagus* beds is at hand. The grower of this vegetable ought to recollect that the two points of excellence in it are first *size*, and sound *succulence*. It should be thick as the thumb and brittle as glass. To secure this result two things are indispensable; it must be produced by very vigorous plants, and it must grow very fast. These two cardinal points must be considered separately.

"Its vigor will depend upon the soil in which it grows, the quantity of manure it receives, and its general treatment. The long stout succulent fangs, or roots, of an *Asparagus* are so tender that they will not form freely in soil which offers much resistance. Nature places it in its wild state among sea sand, the most yielding of all earthly substances, never becoming dry, never remaining loaded with stagnant water, but at every tide receiving a supply of the saline particles that constitute an essential part of the food of the plant. Under such circumstances the roots meet with no obstruction to their full development. There is, however, no apparent necessity for sand; what is really wanted is some soft material, moistened with salt water, and so placed that while it is always wet, it will never become water-logged. How unlike this is to the hard, coarse earth, so often used for this plant we need not say.

But the natural *Asparagus* is never large; on the contrary, it is more like what is technically called 'sprue.' The cause of that is, we presume, to be sought in the want on the sea shore of the powerful manure on which it greedily feeds, when it can obtain it. The wild *Asparagus* has all that it requires for mere health; but it is ill fed; it differs from the fine garden plant just as lean kine differ from fat bullocks. Feeding makes all, or great part of the difference. Experience shows that no manure is too strong for this plant; its great spongy roots can take up any quantity with advantage, if applied at the right season. That season is after it has begun to move in the spring; applied at any other time the fat oozy slime which it loves is absorbed without being assimilated, and soon produces a fatal rot in the roots. Beside this, the plant must be cherished during summer while not under the knife, for it is only thus that its vital powers can be much increased. No exuberance of growth in the *Asparagus* stems can be regarded as excessive; nothing should be done to check it; every branch that a plant is able to form should be anxiously preserved, and if any means can be used to prevent the formation of berries, which we must remember is a process of exhaustion, these means should be adopted, provided always the little thread-like green leaves are in no way injured. Small as they are they conduce to the strength of the *Asparagus*, as much as its broad leaves to a forest tree. Such precautions having been taken, great buds, as large as acorns, will appear in clusters from the crown of the roots, and out of them will rise gigantic shoots in the succeeding year. All these precautions will, however, fail if the *Asparagus* is called upon to bear a crop before it is old enough. Early bearing ruins plants as much as animals, and inevitably brings on premature debility. The older it is before the cutting begins, the stronger, other circumstances being equal, will it be found. The exhaustion attending the production of a crop one year should also be made good by resting the *Asparagus* during the next year. In other words, giant *Asparagus* can not be looked for if the bed is cut oftener than every other year.

"The *Asparagus* being brought to the requisite state of vigor, the next question is how to secure the necessary succulence, which it never has beyond two or three inches in an

English market, and not often anywhere else. That succulence will depend upon temperature as much as other causes. The warmer the Asparagus bed is kept while the sprouts are rising, the more brittle they will be, provided the temperature of the soil does not rise above 75 degrees at the most. Now under ordinary circumstances, everything is done to keep it cold; buried twelve or thirteen inches below the surface, the influence of the sun is slowly felt, and very imperfectly into the bargain. It is only when the roots are lightly covered by some rapidly conducting material that the sun can exercise his proper influence, unassisted by artificial contrivances. Hence, one of the greatest faults that the Asparagus grower can commit is to bury his plants deep. Only observe Mr. KENDALL's practice; his plants are just covered with soil resting upon a deep bed of the most nutritious matter. The earliest rays of the sun are felt in such a case, and as soon as the dormant energy of the plant is roused, it continues to be exercised without a day's interruption. It is true that the Asparagus thus obtained is green; and so it should be. Green-grocers and cook-maids are of a different mind, and we believe are the only authority to the contrary. Their opinions may, we think, be fairly examined by the evidence of the senses of those who have eaten this vegetable; and to that ordeal we have great satisfaction in committing them."

SHELTERING LANDS.

BY WILLIAM BACON, RICHMOND, MASS.

EVERY observer has noticed the difference between the starting of vegetation in spring in different localities, and those often but a few feet separated. In the mountain glen, shut out from cold winds, and almost from sunshine, there is usually a difference of some days in the starting of the leaf and opening of the blossom compared with the occurrence of the same event on the hill top near by, where rude winds sweep unresisted. On the south and east sides of the grove the same effect is always visible; verdure and freshness are seen there, when in the open field nothing greets the eye but the desolation that winter has wrought. Even the few trees that are sometimes planted around dwellings are found to modify the climate—softening the asperities of winter, and yielding cool and healthful breezes in summer.

These facts, so common and so strongly marked, must have been noticed by every one, and yet how few of the many who deplore the severity of climate—lamenting the ravages of frost both in late spring and early autumn—have ever taken the hint from Nature to protect fields and gardens by belts of trees, not only from these frosts, but the cold breezes of winter and the rough winds of early spring? We prophecy a reform in this matter—not immediate and universal, to be sure, for such an event, even in these days of rapid progress, would be miraculous. But the thing is beginning to be done. Its benefits are seen and appreciated, and, if we mistake not, before the commencement of the next century such protections will be as common as gardens, if not as numerous as cultivated fields.

The objections which will be brought against this improvement are easily anticipated. *First*, the everlasting objection to setting out trees of all kinds, that "it will

take the belt so long to grow large enough to be beneficial" comes up. The world has always been full of such prudent calculation in all rural matters. They have been, and are now, an overwhelming majority, but a majority that can not rule; and while they have, with the thing and its utility before them, been resting quietly in such a supposition, the humble minority have been engaged in the work, and are now enjoying the benefit of their labors. Another objection we have heard stated was, that "these belts will occupy too much land." They will take land, to be sure; and we mistake very much if they do not *make* land, too, by increasing the fertility of what remains by ameliorating the temperature, so that it actually produces much more in actual value than the whole did under the unprotected dispensation. New powers of fertility will be given to the soil, and new products will be introduced with greater prospect of success, and twenty articles of comfort and luxury which, if grown at all, were of indifferent quality, will be raised in perfection.

But the land occupied by the belt is not lost. In all the older sections of our country, and on the prairies, every tree that grows in the field or forest, no matter where, adds to the value of the estate. It is so now. It will be more strongly felt in the future, unless some new project shall be introduced to cut off the necessity of fuel and timber; an event not likely to take place. So these belts, if they become too unwieldy in size, or if through the amelioration of climate from natural causes (which we can not expect) so that they are cumbersome or useless, will pay a good per cent. on the value of land when taken off. They need not, under any circumstances, demand a width of more than ten or twelve feet; all beyond this may be appropriated to ordinary purposes of cultivation. We give this as the extreme quantity—all they will require when fully grown, so as to soften the atmosphere for many rods. In the early stages of growth—say for the first ten years—they will require no more ground than a heavy wall, and less than a Virginia rail fence. Belts of deciduous trees would be highly effective, but evergreens are best adapted to the purpose, from the compactness of their branches and leaves, which, when trained by shortening-in the branches, will render them almost impervious to winds. The Pine and the Hemlock are probably best adapted to the purpose from their extreme hardness and compactness of form. The Cedar and Fir, in proper localities, will probably prove equally beneficial for the object.

The imaginary difficulty of successfully transplanting evergreens will doubtless be an obstacle in the minds of many to their adoption for this purpose. But it need not be. They may be as safely transplanted as the Poplar or Willow, if proper care is used in the operation. The ground where they are to be set should be prepared previous to their being taken up, as this will shorten the time of the roots being out of the earth and exposed to the atmosphere, which, without proper precaution, is injurious to any tree. The ground should be prepared by opening a trench amply wide enough to receive all the roots that can be obtained, and allow them to lie extended in their natural position, and so deep that the mellow earth may be thrown back for them to rest upon. They may then be set by a line and loose earth thrown in until the roots are so far covered as to allow ample space for the first year's growth;

after which the sod, if it was sod land, may be thrown in, grass down, and be useful in keeping them in their places, and by decay furnishing food for future growth.

In taking up the plants more than ordinary care is necessary, as they are more sensitive of wounds and bruises than most deciduous trees. It is often the case that they may be found in low, swampy lands, growing over old moss-covered logs, when the roots must necessarily lie near the surface, until they extend to the soil beneath. Such plants, with nearly all their rootlets and the soil connected with them, can easily be obtained, and a failure in them is wholly unnecessary. They would soon dwarf and die if allowed to remain on their log home, but transplanted they become vigorous, thrifty trees. Next to this they can best be obtained from old fields on the margin of swamps, where the soil is often thin from repeated washings, and the subsoil too stiff to allow the roots to penetrate it. In a wet time, like spring or autumn, they can be easily taken out with all, or nearly all, the soil adhering, and in a situation to have it removed with these to their new locality. Such trees are usually best for screens; for, from being continually exposed to the atmosphere, they have acquired a hardiness beyond that attained by sheltered ones. Their branches are firmer and thicker set, which renders them better adapted to the object. If the branches are inclined to grow long and occupy too much land, they may be shortened in and trained in a conical form, when they will present a beautiful wall of verdure at all seasons, so forming an ornament to the grounds, as well as a protection from winds and the fierce driving storms.

NOTES ON FRUITS IN NORTHERN INDIANA.

BY G. C. M., MISHAWAKA, IND.

I PROPOSE to furnish you with a few notes in regard to some varieties of apples and pears which have recently fruited with us.

APPLES.—I believe it is conceded by all who have attended the fairs of St. Joseph, Laporte, and Elkhart counties, that we can produce as fine fruit, in this line, as can be found anywhere. The only drawback we have had the present season has been the apple worm, which has made sad work—in some instances destroying almost all the fruit in entire orchards.

Northern Spy.—Although I procured grafts of this variety some six years ago, yet they fruited this season for the first. I judge from this that it is tardy in coming into bearing. The fruit, however, is fine. I think it will fully maintain its high reputation here.

Wagner.—This also fruited for the first time this season, though on much younger trees, the grafts being but of two years growth. Fruit above medium in size—beautiful in appearance. I think it will prove one of our most valuable varieties.

Dominie.—I have had this in fruit for two or three years, and consider it worthy of very extensive cultivation. It is one of the greatest bearers I have in my orchard

—answering, in this respect, fully to DOWNING's description of it. In addition to this, the fruit is uniformly fair, above medium in size, and of excellent quality. I doubt not, as this variety becomes better known, there will be a large demand for it for cultivation for market.

Baldwin.—From the unfavorable reports made of this variety by the Ohio fruit growers, I was apprehensive it would not succeed well with us; but I am happy to say that so far these apprehensions have not been realized. My trees have borne for three years, and the fruit, in appearance and quality, is fully equal to the same variety in Western New York—not the slightest indication of the “bitter rot.” Should it hold out as it has begun, I shall not regret that I have planted more largely of it than of any other variety.

Rhode Island Greening.—This world-renowned apple is very popular here. It is said not to succeed well on the rich prairies of Illinois, but here, in the St. Joseph valley, it fully maintains its reputation as one of our best winter apples.

PEARS.—I doubt whether there is any part of the United States better adapted to the cultivation of the pear than this. I think we might safely challenge the world to show larger and better specimens of *Bartletts*, *White Doyennes*, *Seckels*, &c., than have been produced in the St. Joseph valley; and it is a very encouraging fact that, although there are numerous trees throughout this region that have been in bearing for many years, yet that scourge of the Pear tree, the fire blight, has never made its appearance in our midst.

Bartlett.—This variety has been in fruit with us for several years. It bears early and well. Fruit uniformly large and fair; quality very good. It is the only early pear worthy of extensive cultivation, in my opinion. As it comes into bearing so early, as a standard, there is not much object in working it upon the quince; but from a few specimens I saw on such trees the last season, I should judge that it is improved both in size and quality.

Buffum.—This variety does uniformly well, and is becoming very popular. The tree is a vigorous, upright grower, and bears abundantly. The fruit, though but medium in size, is fair, and in quality ranks as “very good,” if not as “best.” I have heard a number of good judges of fruit pronounce it equal in quality to the *White Doyenne*. When the thriftiness and productiveness of the tree are considered, I think it will prove one of our most valuable varieties.

White Doyenne.—This noble pear, whatever may be its failings elsewhere, still retains all its ancient excellence with us. No cracking of the fruit or other symptoms of decline has been seen in it. Such specimens as were shown at our county fair would rejoice the eye and gladden the heart of every lover of good fruit. This pear commands a higher price in Chicago (which, by the way, is becoming the fruit market for the Northwest) than any other variety. Several persons who are cultivating it largely have realised from \$12 to \$15 a barrel this season.

Seckel.—The *Seckel* maintains its position here as the standard of excellence in flavor. It proves to be a very good bearer, and the fruit is larger than I supposed from the description of the books; instead of “small,” it approaches “medium” in size.

Louise Bonne de Jersey.—This has fruited on my ground for the first time this year, and I must confess that I am somewhat disappointed with it. Although it is a good bearer, and the fruit fine in appearance, yet there is an *astringency* about its flavor which would destroy its reputation in the estimation of all who know what a good pear is. I hope, however, this is but an accidental circumstance, arising from some peculiarity in the season, and that it "will be better next time."

Belle of Brussels.—Fruit large and handsome, but worthless.

Winter Nelis.—This is an early and good bearer, and the fruit excellent in quality, but it proves a fall pear with us. Ripens from the last of October to December.

I might enlarge these notes by speaking of a number of new varieties which have produced single specimens of fruits, but as these are hardly sufficient to lead to a correct estimate of the character of the fruit, I will defer it till after another year's experience.

[We thank our correspondent for his notes, and hope he will continue them from time to time, as he gains information and experience. We are glad to learn that our New York favorites, the *Northern Spy*, *Wagner*, *Baldwin*, and *Greening* apples, and *Bartlett*, *Seckel*, and *White Doyenne* pears, sustain their excellence as they go westward. We feel confident that the *Northern Spy* will do well in the west and south. The *Louise Bonne de Jersey* will be all right. It never is a *sweet* pear, like a *Flemish Beauty* or a *Belle Lucrative*, but vinous, like *Brown Beurre*; and all vinous pears are liable, if mismanaged in any way, to be more or less astringent. — Ed.]

GRAPES AND GRAPE CULTURE.

BY A. MESSER, GENEVA, N. Y.

It may perhaps be gratifying to some of your readers engaged in grape culture, to have a few words more at the close of the season. The vines in my house did well, and the fruit was in good condition, until about the first of September. The *Royal Muscadine* were perfectly ripe, and as well flavored as the same variety can be expected to be, under any circumstances. Other varieties were not quite matured. But the rains had fallen quite copiously for several weeks, at short intervals. The border outside was becoming thoroughly soaked; and a few cold and cloudy days sadly arrested the ripening process. If, from this time, two-thirds of the falling rain could have been carried off without penetrating the earth, the fruit would have continued to improve. But for the want of this precaution, unnecessary in common seasons, it was deficient in color and flavor. I think I have never witnessed such an excess of moisture at this season of the year. From the 15th of September to the 1st of November, the soil has not been sufficiently dry to allow us comfortably to dress out our strawberry beds.

My grapery is designed to be a cold house; but, on account of the proximity of

forest trees, and other obstructions, it does not obtain a fair proportion of light and heat from the sun. To compensate for this deficiency, I made some use of artificial heat in April and May. As a general thing, in good exposures, I hold to the "cold graperly," in the best sense of the term. If we leave it all to Nature, after furnishing a good, close house, made after approved models, we are in the way to have the best of fruit, in common seasons. But *my* grape season ended about the middle of September; and if there had been no forcing in the spring, the *Hamburgs*, *Muscats*, and *Frontignans* would have been worthless. I observed that of the *Purple Frontignan*, in the vinery of Mr. H. S., in this village, many clusters decayed prematurely, by excess of wet, and cool, cloudy weather; and he enjoys a full exposure to the sun. Let those who are constructing, or are about to construct, a grape border for growing foreign varieties under glass, observe two rules: Let them be sure to provide a good and sufficient drainage, in the first place; and secondly, use a light vegetable mold for a considerable part of the compost.

It has been a question with some who are supposed to be learned on the subject, whether the *Cannon Hall* is better than, or essentially different from, the *White Muscat of Alexandria*, of which it claims to be a seedling. Of the former, what can be known from one bunch, grown on a young vine, is, or rather *has been*, before us. The berries were about the same size as the largest *Muscat*—a little more oblong—a little more yellow in color—and the flavor equal. Our fruit committee at the county fair can speak on that subject, for they saw and tasted; but their report contains nothing to indicate that a single foreign grape grown under glass was exhibited on the occasion—and yet there were there collections of several varieties, from three different graperies, which for beauty, size, and maturity, would compare favorably with any other similar show in this part of the country. The *Cannon Hall* also with me ripened about a week in advance of the parent, the *Muscat of Alexandria*.

Among other marks to show that this elegant branch of horticulture is moving onward, I am happy to say that my friend and neighbor, J. S. KING, has become so much infected with the grape *mania* that he has just erected a beautiful vinery, which makes the fourth in this village. It is a span roof, which is also arched, and is built after the model of the Clinton Point vinery, an engraving of which is to be found in the *Horticulturist*, Vol. IV. The dimensions are: 30 feet long, 18 feet wide, and 14 feet high—which, with border, cost about four hundred dollars. A few days ago a gentleman from Syracuse, with a carpenter, came and examined it, and resolved to build one on the same plan. He was "waked up" to it by rather casually dropping in at PARSONS & Co.'s establishment, at Flushing. I advised him to subscribe for the *Horticulturist* at once, which (strangely to say) he had not done.

By the way, myself and others are highly gratified with the "Facts in Native Grape Culture," as given by your correspondent in Naples. "The vine is a gross feeder." Let us have all the facts.

NEW PLANS FOR GREEN-HOUSES.

BY ROBERT MESTON, ASHWOOD, TENN.

IN giving my plans for an improvement in green-houses, I will first remark that the object is to improve the interior of such buildings, by doing away, in some instances, with the long and heavy-looking stages, and introducing something more light and elegant in appearance. You will see by the diagrams that the object is to group all the plants on circular and revolving stages, being so constructed that all the pots are hid from view. The object in this revolving stage is to give to all the plants an equal portion of sun and light. In fact, the plants on these stages will "know no East, no West, no North, no South;" being under the control of the operator, they can in an instant be changed at pleasure.

Fig. 1 is a span-roof house, that in some cases might be beneficial to commercial gardeners, as it may be placed east and west as well as north and south. This house

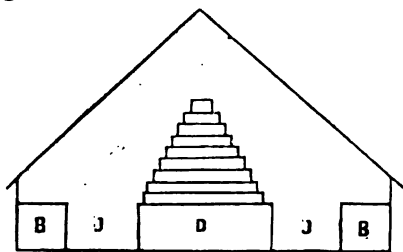


Fig. 1.

is sixteen by forty feet in the clear, side walls three feet, height ten feet. B, B, front stages, two feet wide. J, J, walk, three feet wide, all round the house. D, showing the position of a circular stage, six feet in diameter at the base. This house will hold seven of these stages, by setting them so as not to touch. There will be little or no room lost in this system of staging plants, and it will have

the advantage of bringing any portion of the plants to the sun when required. When the houses are filled with mixed plants, I think the grouping system would be of advantage, as they do not all require the same treatment the season round. And if ever such stages should be required they can be made very plain: the revolving part of the stage can be placed upon a wooden frame, running round in a cast-iron groove; the shelves can be cast whole, with plain open-work, say three bores to a shelf, leaving the pots in view, as in the present case.

I will now turn to what I call a model green-house (fig. 2). It is a house twenty-seven by forty feet, supposed to be a span-roof house—but I shall say nothing about the building, my remarks being confined to the fitting up of the interior. *a, a, a, a*, to receive the cast-iron cylinder, 2; this is of ornamental cast-iron, the pattern to be flowers and foliage—height, two feet six inches. 3, a moulding; over that, eight inches of ornamental work, of another style, to hide the first row of pots on the stage. About sixteen inches from the top of the cylinder, on the inside, is a strong flange, two or three inches wide, intended to carry the stage. 4, cross section, that supports the bearers. 5, rollers. 6, a straight piece of square iron, to receive the top, 7; the bearers passing in at 8, and secured with bolts at 9. The shelving to be cast a little hollowing, rising in the front about eight inches, to correspond with the ornamental work on the top of the cylinder, which rises in the back two inches. An inch or two

of fine sand, put on the shelves for the double purpose of taking up the drip from the pots, and absorbing it again in the house. *g*, cast-iron pipe, to act as the chimney, the upper part to correspond in workmanship with the stages. *h*, stage, eight feet in diameter; this can be made to revolve by attaching the bearers to a strong bolt round the chimney. *i*, cistern; the water to be conveyed under ground; the top of the cistern to be under the floor of the house. *f*, pump, also to be hid, by an ornamental shaft, not less than four feet high without the vase, to be cast round, square, or octagon (I suppose it ought to be round, to be in keeping with the stages). The spout of the pump screws on, and the handle is made to take off at pleasure. When the pump is not in use it is shut up in this column, by means of two movable panels. *e*, monumental shafts, or columns, varying in height, similar to the one above. *b*, stages, to correspond with the above, but of course stationary. *c*, corners, to group large plants or stages, as may be required. *n*, border, one foot wide, running all round the house, about two feet six inches deep, to be well drained and filled with suitable compost, for creepers to run up the rafters. *k*, four-inch brick wall; holes to be left in the first course of bricks, as an escape for the drainage from the border. *m*, a wall like *k*, without the openings. *l*, this place receives the heating apparatus, being two feet six inches wide in the clear. *d*, *d*, door, four feet wide. The whole of the floor to be covered with a neat cast-iron grating, to be cast in panels, to be taken up at pleasure. An ornamental flange runs all round the house, separating the border from the floor; the four stages, 10, to be finished with vases. Brackets may spring from the pilasters, or between the rafters, bearing an acorn cup or Magnolia flower, to receive a pot with some pendulous plant. All the vases for plants of that nature swinging from the roof in convenient places, ornamental baskets of iron filled with the same plants, a few neat iron chairs placed on the floor in convenient places, to be bronzed. There is in this house a little over six hundred feet of staging, running measure. This house would be well adapted for a first class place, where a supply of plants in season could be supplied. As this is the iron age as well as the progressive, suppose both were applied to the beautifying of the buildings dedicated to Flora.

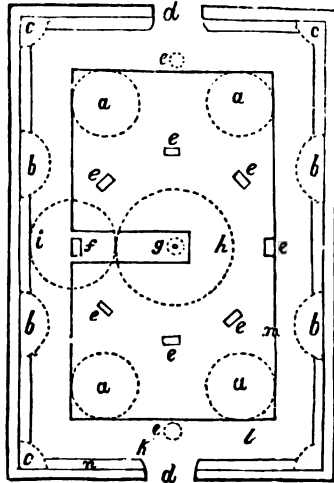
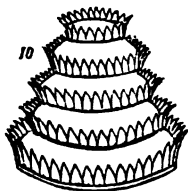
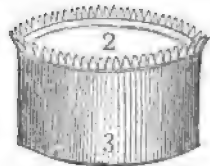
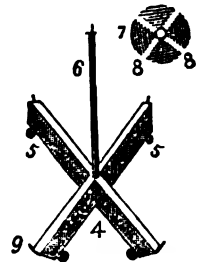


Fig. 2.



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Foreign Notices.

SCRAPS OF HISTORY OF POPULAR ENGLISH FRUIT.—The increase and skillful application in the adornment of our parks, gardens, and dwelling-places with beautiful flowers and plants has ever been regarded as one of the most commendable and meritorious marks of persons of taste. To show how true and proper these views are, it would only be necessary to refer to the magnificent timber trees and ornamental shrubs and flowers which enrich and beautify so many of the country residences of persons of wealth in all parts of Great Britain. This is in a large measure both good and profitable; but it is but a section—a part of a great work; and although the effects are felt and enjoyed by every inhabitant of these islands, the actual benefit and ownership is enjoyed by the opulent only. The encourager, cultivator, and patron of hardy fruit-bearing trees, on the contrary, confers a universal benefaction alike on the rich and the poor. Every person who shares at all in the enjoyments of floriculture envies, more or less, the enjoyment and satisfaction of those who originate some garden cross-bred plant possessing qualities which speedily render it an object of popular attraction. A new Dahlin, a new Fuchsia, a new Pelargonium, or any similar flower when raised by some fortunate amateur, carries with it everywhere the name of the raiser; and this is always deemed a mark of honorable distinction which every real florist is very properly ambitious to obtain. So also is it with other kinds of horticultural productions; and all this is very proper, and we need not say agreeable: and why should a florist be indifferent to the feeling and desire so common in all other classes—that is, to perpetuate his name by associations with some object connected with those pursuits in which he takes especial delight? We say all this is perfectly right.

If in these fugitive and short-lived objects there be honor and distinction sufficient to stimulate the efforts and zeal of the florist, what must be the honor justly felt by the originators of some new kind of hardy fruit—fruit fitted alike for the use of rich and poor—such, for example, as the *Kewick Codlin*, the *Hawthorndean*, the *Ribston Pippin* apples, the *Damson* and *Orleans* plums, the *Jargonelle* pear, and other popular fruits, some one or other of which is certain to be found in every cottager's garden in Great Britain? It is a singular fact connected with the history of fruit trees, which has been strenuously contended for by some and denied by others, that fruit trees, after a given number of years, deteriorate and become useless. This is asserted to be the case with the *Golden Pippin*, which, it is affirmed, is not now what it was, in point either of size, flavor, or productiveness, fifty years ago. We are not quite sure that we are prepared to deny this theory, but several other kinds of apples have more recently been introduced, and some of these of high merit; and it is not very impossible that the comparative merits of this variety have suffered in public estimation from this cause, rather than from any actual deterioration in the quality of the fruit itself, and so also with others similarly regarded. In the north of England the *Ribston Pippin* has long been the favorite apple, as the *Blenheim Orange* has been in the west. It is a little singular that within the last few days the following remarks respecting the original tree of the *Blenheim Orange* apple have come into our hands:

"The last remnant of the stem of the original tree of the *Blenheim Orange* which first produced this celebrated apple is no more—the sapless and molding relic itself exists no longer: that which the wood-louse and the worm were gradually consuming, the war of the elements and the hand of man have hastened to a swifter decay. The rains and wind of last autumn leveled the rotten and hollow shell, and the broken fragments have been gathered up and committed to the fire. 'Thrown down and cast into the oven,' this time-honored relic has fulfilled the stern decree of Nature against all vegetable life. The only sound piece of wood remaining

was preserved by a horticultural enthusiast to make a snuff box, to serve as a memorial of the past, and to recall visions of him 'who first planted the tree.' In the autumn of 1851 we wrote as follows: 'In a somewhat dilapidated corner of Old Woodstock stands all that remains of the original stump of the *Blenheim Orange*; it is entirely dead, and rapidly falling to decay, and time will soon claim the hollow rotten remnant.' We are told how the white-haired gardener, KEMPSTER, first raised from seed this beautiful and justly celebrated apple—that he lived in his little cottage garden, in Old Woodstock, a plain, practical, laboring man. KEMPSTER is long gathered to his fathers, and the favorite tree to which he gave his name is now no more seen; nothing remains to mark the spot except a young tree immediately derived from the patriarchal trunk itself. Though the parent stem has forever vanished, a numerous and flourishing offspring thrive in the neighboring crofts of Woodstock, Kidlington, and Bladon, and the hamlets and villages of Oxfordshire; and thence are now generally dispersed throughout the length and breadth of this island, and have reached even to our Australian and American colonies. Some have thought this apple was 'raised' in Blenheim Park by the Duke of Marlborough's gardener; but the towers of Blenheim in this case have no claim to our fruit. It was named in honor of one of the Dukes of Marlborough."—*Oxford Journal*.

We find from other records that this tree was raised, or first brought into notice, in the year 1781. This would seem but a short period for the duration of life of an Apple tree; but it may not be wholly correct; or, if it be correct, the tree may have been exposed to injurious or unfavorable influences, and thereby hastened its decay. Some writers have professed—as HALLER has done in Herefordshire—that Apple trees have been ascertained to reach the goodly age of one thousand years; but the late Mr. KNIGHT asserts that the apple in course of years deteriorates, and that its natural age is confined to two hundred years. No kind of fruit can be brought to the same perfection with the same certainty, and with the same small amount of trouble, in this country, as can the apple.

With regard to the introduction of the apple, writers are generally agreed that we are indebted to the efforts of Lord Scudamore, who was English Ambassador at the Court of France, during the reign of CHARLES I., about the year 1629; and we are informed by EVELYN that about fifty years later, HARRIS, fruiterer to HENRY VIII., first planted Apple trees about the environs of towns and villages in Kent, "to the universal benefit and improvement of the country." At the present moment, no one seems to concern himself about our domestic fruits. The late Mr. KNIGHT has gone, and no one has taken his place. The Horticultural Society cares for none of these things; and at present no one is listened to, who talks of any thing but Orchids and Gilliflowers.—*London Gardeners' and Farmers' Journal*.

LEAVES FROM MY CHINESE NOTE BOOK. —Under this title I propose to send you, from time to time, descriptions of Chinese gardens, plants, and other objects of natural history which I consider of sufficient interest to occupy a place in your columns. As many of your readers have, no doubt, heard of "Howqua's Mixture," I shall begin by attempting to describe HOWQUA's garden.

This garden is situated near the well known Fa-tee nurseries, a few miles above the city of Canton, and is a place of favorite resort both for Chinese and foreigners who reside in the neighborhood, or who visit this part of the Celestial Empire. Having occasion to be in Canton a few weeks ago, I determined on paying it a visit in company with Mr. M'DONALD, who is well known in this part of the world as an excellent Chinese scholar, and to whom I am indebted for some translations of Chinese notices, which appeared very amusing to us at the time, and which, I dare say, will amuse your readers.

Having reached the door of the garden we presented the card with which we were provided, and were immediately admitted. The view from the entrance is rather pleasing, and particularly striking to a stranger who sees it for the first time. Looking "right ahead," as sailors say, there is a long and narrow paved walk lined on each side with plants in pots. This view is broken, and apparently lengthened by means of an octagon arch which is thrown across, and beyond that a kind of alcove covers the pathway. Running parallel with the walk, and on each side behind

the plants, are low walls of ornamental brickwork, latticed so that the ponds or small lakes, which are on each side, can be seen. Altogether, the octagon arch, the alcove, the pretty ornamental flower pots, and the water on each side, has a striking effect, and is thoroughly Chinese.

The plants consist of good specimens of Southern Chinese things, all well known in England, such, for example, as *Cymbidium sinense*, *Olea fragrans*, Oranges, Roses, Camellias, Magnolias, &c., and, of course, a multitude of dwarf trees, without which no Chinese garden would be considered complete. In the alcove alluded to there are some nice stone seats, which look cool in a climate like that of Southern China. The floor of this building is raised a few feet above the ground-level, so that the visitor gets a good view of the water and other objects of interest in the garden. That this is a favorite lounge and smoking place with the Chinese, the following Chinese notice, which we found on one of the pillars, will testify: "*A careful and earnest notice*: This garden earnestly requests that visitors will spit Betle* outside the railing, and knock the ashes of pipes also outside." Several fine fruit trees and others are growing near the walks, and afford shade from the rays of the sun. On one of these we read the following: "Ramblers here *will be excused* plucking the fruit on this tree."

Near the center of the garden stands a substantial summer-house, or hall, named "the Hall of Fragrant Plants." The same notice to smokers and chewers of Betle-nut is also put up here; and there is another and longer one which I must not forget to quote. It is this: "In this garden the plants are intended to delight the eyes of all visitors; a great deal has been expended in planting and in keeping in order, and the garden is now beginning to yield some return. Those who come here to saunter about are earnestly prayed not to pluck the fruit or flowers, in order that the beauty of the place may be preserved." And then follows a piece of true Chinese politeness: "We beg persons who understand this notice to excuse it!" Passing through the Hall of Fragrant Plants we approached, between two rows of *Olea fragrans*, a fine ornamental suite of rooms tastefully furnished and decorated, in which visitors are received and entertained. An inscription informs us that this is called "the Fragrant Hall of the Woo-che tree." Leaving this place by a narrow door we observed the following notice: "Saunterers here will be excused entering." This apparently leads to the private apartments of the family. In this side of the garden there is some fine artificial rockwork, which the Chinese know well how to construct, and various summer-houses tastefully decorated, one of which is called the "Library of Verdant Purity." Between this part of the garden and the straight walk already noticed, there is a small pond or lake for fish and Water Lilies. This is crossed by a zigzag wooden bridge of many arches, which looked rather dilapidated. A very necessary notice was put up here, informing "saunterers to stop their steps in case of accident."

On the outskirts of the garden we observed the potting sheds, a nursery for rearing young plants and seeds, and the kitchen garden. Here a natural curiosity was pointed out by one of the Chinese, which, at first sight, appeared singularly curious. Three trees were growing in a row, and at about twenty or thirty feet from the ground the two outer ones had sent out shoots, and fairly united themselves with the center one. When I mention that the outer trees are the Chinese Banyan (*Ficus nitida*), it will readily be seen how the appearance they presented was produced. The long roots sent down by this species had lovingly embraced the center tree, and appeared at first sight to have really grafted themselves upon it.

I am afraid I have given a very imperfect description of this curious garden. Those who know what a Chinese garden is will understand me well enough, but it is really difficult to give a stranger an idea of the Chinese style which I have been endeavoring to describe. In order to understand the Chinese style of gardening, it is necessary to dispel from the mind all ideas of fine lawns, broad walks, and extensive views; and to picture in their stead everything on a small scale—that is, narrow paved walks, dwarf walls in all directions, with latticework or ornamental openings in them, in order to give views of the scenery beyond, halls, summer-houses, and alcoves, ponds or small lakes with zigzag walks over them—in short, an endeavor to make small things appear large, and large things small, and everything Chinese. There are some of these ornaments, however, which I think might be imitated with advantage in our own gardens. Some of the

*The natives in the south of China, like the Malays, are very fond of chewing the fruit of the Areca, commonly called Betle-nut.

doorways and openings in walls seemed extremely pretty. In particular I may notice a wall about ten feet high, having a number of open compartments filled with porcelain rods made to imitate the stems of the Bamboo. I shall now close this notice with the modest lines of the Chinese poet, which we found written in the "Library of Verdant Purity," and which seemed to be an effort to describe the nature of the garden :

'Some few stems of Bamboo plants,
A cottage growing round;
A few flowers here—some old trees there,
And a mow of garden ground."

—*R. F., in London Gardeners' Chronicle.*

TAKING UP AND STORING DAHLIAS.—In a treatise on this flower, recently published by GROOMBRIDGE, the cutting down is recommended "not to be performed until the first frosts have completely checked vegetation. For choice, good varieties, it is an excellent plan," says the authority, "to place a small hillock of dry ashes round the stem of each plant. This protects the embryo buds both from any sudden severe frosts, and also carries off to a distance the heavy autumnal rains. In wet grounds especially, this is a good and useful application, though in high dry land it may not be absolutely necessary. Choose some dry morning, when there is a probability of a dry following day, and cut down the plants within one foot of the ground. The day following take up all the roots so cut down, and turn them upward to allow the watery sap to drain from the stems. Bring them in under cover, and see that the numbers or names are all securely tied to the stems with copper wire. Mat or twine is not good for this purpose, because it will soon rot, and the name may easily be displaced or lost—a matter of consequence to such as wish to keep their plants true to name. The roots should all be taken up on the same or the following day, in order to become all dry together, so that they may be put away for the winter at once. Let all the soil be carefully picked out from among the tubers without wounding them. As soon as they are quite dry, and before they begin to shrivel, fix upon a place to store them away. A dry cellar is best, because there is, in such a place, just sufficient moisture to keep the tubers fresh without shriveling, and the buds alive. Pack them with their stems downward, and cover them up with dry clean straw, several inches thick, a layer of roots and a layer of straw between and under each layer of roots. In these winter quarters they may remain till the season for starting them into growth returns. They should be looked over about once a month, and all decaying roots and rotting stems removed, and fresh dry straw laid upon them to absorb any moisture; this is the best method of keeping Dahlia ground-roots. Pot-roots should have their tops cut off, and the pots laid on their side in a place where the frost can not have access to them. If the amateur has a green-house, these pot-roots can be conveniently stored away under the stages, laid on one side: no water that may run through the stage from the plants will injure them. Pot-roots keep better than ground-roots, and therefore it is desirable to have a few of each variety struck later for this purpose. If the amateur has no cellar for his ground-roots, nor a green-house for his pot-roots, he may store the former away in boxes, in a dry chamber, or in any out-building, provided the frost can be kept from them by some kind of covering, such as old carpets or garden mats. In such places they will require more frequent looking over, to remove all decaying roots and stems.—*London Gardeners' Chronicle.*

CULTURE OF THE PELARGONIUM.—I strike my cuttings, which are obtained as soon as the wood is thoroughly ripe, under hand-glasses in the open ground, watering them very slightly for a week or two, but exposing them to dews at night. When they are well rooted, they are lifted and potted in turfy loam, two year old cow dung, some peat and silver sand, all well mixed together, and placed on an efficient drainage. The plants are then set in a cold frame, and kept close in the day-time, till they have become established; but they are left open at night. Ultimately the lights are off during both day and night, and, as soon as they will bear it, they are placed on boards, exposed to all weathers, until the long, cold, late autumn nights cause them to be placed in-doors. The main point in their out-door treatment is, never to allow them to get water-logged

or stunted in their growth. They receive a shift in November, using a compost mentioned above without the peat. They are again shifted in February, and each shoot stopped at the fourth joint. Lateral shoots are then produced, and these are tied out horizontally, so as to form the basis of the future specimen. The lateral shoots are also stopped, and by these means plenty of wood is obtained for large plants in the following season. But I have another mode of proceeding, which is, to take strong plants in April or May, pot them in 11-inch pots, place them out of doors, and pick the flowers off them throughout the season. Next year they are fit for exhibition. The plants that are to blossom in May are never stopped after they are cut down in July. The June plants are stopped early in January, and those for July in February. To grow *Pelargoniums* successfully, I find that much depends on their winter treatment. They should not receive too much water or fire-heat, and the wood should be well ripened before they are allowed to flower, if a fine head of bloom is wanted. My general time for cutting down is between the first week of July and the middle of August, according to the ripeness of the wood. When the plants have fairly broken, the old soil is shaken clean from their roots; the latter are trimmed in a little, and the plants are re-potted and placed in a frame till they have become established, when they are placed out of doors till they are removed to their winter quarters. To come in for exhibition in May or June, they are re-potted in November, and for July in February. When they begin to show flower-buds, liquid manure is occasionally given them. The latter is made by putting into a large tub of soft water half a barrow-load each of cow, sheep, and horse-dung, and a peck of lime, mixed well and using the clear liquid, after two-thirds of clean water has been added to it. During the blooming season plenty of water (not liquid manure, that is only given five or six times just before they come into flower) is required, otherwise the foliage becomes discolored, and the blossoms come small and deformed.—*P.*, in *London Gardeners' Chronicle*.

CULTURE OF THE CINERARIA.—In order to produce strong blooming plants in small pots early in February of this gem of the winter season, the offsets from stock-plants should be potted into 3-inch pots, or if seedlings they should have been pricked out into the same sized pot about the middle of August; and as seedlings grow quicker than offsets, they will bloom about the same time. The second week in September would be a good time for potting them into 4-inch, and the stronger plants into 5-inch pots, and in a month hence give them their final shift—the former into 5-inch, and the latter into 6-inch pots. The roots will quickly fill the pots, consequently they will require a plentiful supply of water, for if stinted in this respect while growing, they will lose the best of their foliage, on which their fine appearance so much depends, and what would have been flowering shoots will degenerate and become “broody” and be entirely worthless for blooming purposes. The soil I have found them thrive best in consisted of two-thirds good turfy loam, one-third rotten dung thoroughly decomposed, and a little rough sand; pot firmly, and drain the pots well, from first to last a good cool pit in a sunny aspect will both grow and bloom them.—*R. M.*, in *London Gardeners' Chronicle*.

WHITE IVY-LEAVED PELARGONIUM.—When allowed to scramble freely over the surface of the soil, with an invisible peg here and there, this is one of the prettiest bedding plants we have. Its short petioles contrast admirably with the long flower stems, giving the blossoms a charming effect. It is of good habit, and produces abundance of flowers, the latter being so well set off by the stout, glossy, horse-shoe foliage, that I think it can not possibly fail to please those who may be induced to grow it.—*W. Browne*, in *Gardeners' Chronicle*.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY, SEPTEMBER 6.—This, the last of the Society's meetings for this year, was well attended, and as an exhibition it was considerably better than the autumn display of 1852, both as regards the quality and quantity of the subjects brought forward. Miscellaneous collections of plants were plentiful and good, but the chief feature was, of course, the Dahlias, some of the specimens of which were exceedingly fine. We noticed Sir Charles Napier, Duke of Wellington, Miss Caroline, Lilac King, Plantagenet, Sir Robert Peel, Sir J. Franklin, Queen of Beauties, Queen of Lilacs, Essex Triumph, Bob, Sir F. Bathurst, and Ama-

zon, in excellent condition. The newer kinds do not appear to be quite so large, perhaps, as Dahlias exhibited a few years ago, but they are much closer in the petal, deeper, and certainly, to our taste, much more beautiful. The first stands were deservedly much admired. The awards were as follows:

Amateurs, 24 blooms: 1st, Mr. J. ROBINSON, Pimlico, with Duke of Wellington, Admiral, Essex Triumph, Thames Bank Hero, Bob, Sir C. Napier, Scarlet King, Imbricata, Malvina, Miss Caroline, Cobden, Nepaulese Prince, Sir R. Whittington, Absalom, Red Gauntlet, Fearless, Sir R. Peel, Scarlet Gem, Mr. Herbert, Sir F. Bathurst, Annie Salter, Triumphant, Shylock, and Morning Star; 2d, Mr. JAMES, Stoke Newington, with the following varieties, in addition to the sorts named in the first stand, viz, General Faucher, El Dorado, Yellow Standard, Mr. Selden, Sir J. Franklin, John Davis, G. Glenny, Mrs. C. Bacon, Edmund Foster, and Louisa Glenny. **12 Blooms:** 1st, Mr. BATTIE, of Erith, with Duchess of Kent, Sir J. Franklin, Sir R. Peel, Duke of Wellington, Barmaid, Sir C. Napier, Queen of Whites, Bob, Elizabeth, Sir F. Bathurst, Fearless, and Sir R. Whittington; 2d, Mr. HOLMES, Hackney, with Sir R. Whittington, Mrs. C. Bacon, Sir C. Napier, Duke of Cambridge, Wellington, E. Foster, G. Glenny, Sir F. Bathurst, General Faucher, J. Davis, Cobden, and Mr. Selden. *Fancy varieties*—12 blooms in 8 varieties: 1st, Mr. J. ROBINSON, with Mrs. Hansard, Phæton, Gloire de Kain, Triumphant, Duchess of Kent, Empereur de Maroc, Maid of Lodi, Floral Beauty, Laura Lavington, and Flora M'Ivor; 2d, Mr. EDWARDS, of Holloway, with Mrs. Hansard, Gloire de Kain, Rachel, Laura Lavington, Mrs. Willis, Reine de Belges, Saracen, and Miss Compton.

NURSERYMEN.—24 blooms: 1st, Mr. TURNER, of Slough, with Bob, Mr. Selden, Queen of Lilacs, Sir J. Franklin, Malvini, Thames, Bank Hero, Sir C. Napier, Amazon, Duchess of Kent, Miss Caroline, E. Foster, Princess Radziwill, Miss Spears, Mr. Herbert, Sir R. Peel, Exquisite, General Faucher, Fearless, G. Villiers, Rose of England, Essex Triumph, Sir F. Bathurst, Wellington, and Queen of Whites; 2d, Mr. KEYNES, of Salisbury, with Negro, Queen of Whites, Morning Star, Mrs. Selden, Mr. Selden, Beauty of Kent, General Faucher, Miss Caroline, Louisa Glenny, Malvina, Douglas Jerrold, Sir F. Bathurst, Model, Queen of Yellows, Capt. Warner, Admiral, Exquisite, Wellington, Magnificent, Lilac King, and Sir C. Napier. *Fancy Dahlias*, 24 blooms, 18 varieties: 1st, Mr. TURNER, with Gloire de Kain, Laura Lavington, Phæton, Claudia, Duchess of Kent, Zebra, Elizabeth, Princess Charlotte, Lady Grenville, Mrs. Willis, Kingfisher, Kossuth, La Pæon Miss Ward, Spectabilis, Princess Helena, Attraction, and Reine de Fleurs; 2d, Mr. KEYNES, with Mrs. Hansard, Laura Lavington, Rachel, Mrs. James, Flower of the Day, Empereur de Maroc, Gloire de Kain, Triumphant, Unanimity, Elizabeth, Phæton, Princess Charlotte, Duchess of Kent, Spectabilis, Nancy, Reine de Belges, Lady Grenville, and Wonderful.

In the Seedling tent there was a large number of flowers, the majority of which were inferior in quality to those already out; there were, however, a few first-class blooms. Those selected by the censors for certificates were Fanny Keynes (Keynes), pale yellow, tipped with rosy purple, large, and of fine form; Rachel Rawlings (Keynes), peach of lilac, of a very delicate shade, and exquisite in form; Ringleader (Holmes), a deep ruby rose, of the finest symmetry; Slough Beauty (Bragg), bluish white, strongly tipped with crimson, full size, good outline, but center a little confused. There were several good fancy seedlings, which also had certificates. Admiration (Green), white, edged with scarlet, is very attractive; color well distributed, flower full size. Leader (Keynes), a heavy striped flower, full, of good size and shape. Topsy (Keynes), white and purple, an improvement on *Elegantissima*. Marvel (Pope), orange, striped and mottled with red; novel. King of Yellows was also shown in good condition, as was likewise Wyness's Princess Royal, which is an attractive flower. Fair Rosamond and Incomparable Verbenas, shown by Mr. BRAGG, were fine flowers, as were also Forget-me-Not, Angelina, Triumph, Electra, and Nobilissima, from Mr. SMITH, of Hornsey. Hollyhocks were confined to a stand of seedlings, from Messrs. PAUL, who had beautiful specimens of the following, viz, Conspicua improved, Zenobia, Laura, Flambeau, Pink Model, Sir R. Peel, Lizzie, Prof. Dick, White, Globe, and one or two others. Some good specimens of Japan Lilies came from Messrs. OVER, BARNES, and GAINES, and there was a nice collection of China Asters from Messrs. FRASER, of Leabridge Road Nursery. — *London Gardeners' Chronicle*.

Editor's Table.

THE present autumn has been the most favorable for out-door work that we remember to have had here in many years. From the first of October until this time (middle of November) there has not, we believe, been one day's interruption—no heavy rains or hard frosts; the ground has been in the best possible condition. Nurserymen have been enabled to finish up their sales in a manner that must be quite satisfactory to themselves and customers, and also to complete their autumn planting, plowing, sowing of seeds, housing of plants, &c., in the best manner. This is a matter of importance, now that nursery operations have become so extensive. Gardeners, too, have had a fine time to store their crops and perform their fall operations on the ground, and of which, we have no doubt, they have availed themselves. We have never known so much autumn planting to be done as there has been this season. We trust that no one who has planted trees will fail to take such precautions in the way of *staking*, *mulching*, and protection, where necessary, as will ensure the safety of their trees during winter. It is much better to take what may seem unnecessary pains than run the risks of losing valuable trees. There is no necessity for loss either in fall or spring planting, if people will but exercise ordinary care and judgment. Mice are very frequently destructive to trees during winter; and to avoid this we urge the clearing away of all long grass, weeds, heaps of rubbish, and every thing affording harbor for vermin in the neighborhood of plantations. This we find a sure remedy.

PLANT-STAGES IN GREEN-HOUSES.—Mr. MESTON's communication, which will be found on another page, directs our attention to some points of importance on this subject. It is very well known that plants on ordinary stages, whether the house be a lean-to, span-roofed, or curvilinear, do not enjoy equally the advantages of light and air; and this, beside being a great inconvenience to the gardener, prevents that symmetry of growth so desirable. Every person, who has grown only a few window plants, has observed the influence of the light, and felt the necessity of turning the plants from day to day to keep them from becoming one-sided and irregular. There is also another point from which the matter should be viewed; and that is its appearance. The ordinary stages are certainly the most formal arrangements possible, and admit the exercise of taste in the grouping of plants to a very limited extent; and thus very much of the gratification which a collection of plants might afford is necessarily lost. It is impossible to inspect them all satisfactorily; and the labor of watering, cleaning, &c., is greatly augmented on these accounts alone. Some system of fitting up the interior of green-houses with *groups* of stages seems to us exceedingly desirable. These would admit of the tasteful grouping of plants, as in a flower garden, and all would be accessible by foot-paths, which also, under such an arrangement, add greatly to the convenience and elegance of the house. Cast-iron appears to us to be the most suitable material for such stages, being, at the same time, durable and capable of being made light and elegant in appearance. It can not be supposed that such groups of stages

would provide accommodation for so many plants in the same house as the common lean-to, triangular, or curved stages; but this is a consideration of minor importance, as it seems to us, in private establishments; for one hundred plants, well grown and tastefully arranged, would certainly yield more satisfaction to the proprietor than one thousand indifferently grown and huddled together on a common stage.

The professional plant-grower must economize his space, his object being, generally, not to grow fine specimens, but to propagate and bring forward into a saleable condition as many plants as possible with a certain amount of heat and house room: all his space must be filled to the best advantage without any particular reference to appearance. Whatever method be adopted in the arrangement and display of plants in houses, it must always be borne in mind that they must be as near the glass as possible, more especially all soft-wooded plants that are liable to be drawn up into lean, lanky forms in the absence of a sufficient degree of light. Large houses generally are difficult to manage in this respect; and this is one reason why we often find very poor plants in elegant houses, and very good ones in what might be considered mere sheds. As the comfort and convenience of a dwelling are more important than the style or appearance of its architecture, so in plant-houses the first and foremost consideration always should be the well-being of the plants; but this affords no reason why good taste should not be exercised as far as may be consistent with circumstances.

FRUITS FROM FRANCE.—The Genesee Valley Horticultural Society has received from M. ANDRÉ LE ROY, Angers, a box of fruits containing specimens of upward of ninety varieties of pears, twenty-seven of apples, and two or three of quinces. Unfortunately, there were in the collection many early autumn varieties that were in a complete state of decay, and had injured many that would otherwise have come safe. A large proportion of the sorts have already been exhibited in this country; but several new and rare sorts, and even some old varieties not grown here, have been examined with much interest. The fruit committee will make a report hereafter. In the mean time, we thank M. LE ROY in behalf of the Society.

HOW TO TREAT TREES RECEIVED WHEN THE GROUND IS FROZEN, OR DURING FREEZING WEATHER.—We occasionally hear of people being quite at a loss to know what to do with trees received in a cold time, or when the ground is frozen. The way is, either deposit the packages in a cellar as they are received, or open them and set the roots in earth until the weather changes: or a trench may be made in the open ground, even if the surface must be broken with a pick-axe, and the trees laid in until they can be planted. They may remain in this state quite safe all winter. Every season we receive packages of trees from Europe in mid winter, and we find no difficulty in taking care of them in this way.

THE EARLY TILLOTSON PEACH.—A short time ago we took occasion to remark on the failure of this variety in the orchards around Rochester. Within a few weeks we have had information from several orchardists in Ohio and Kentucky showing it to be grown there with complete success. There it grows vigorously, is exempt from mildew, and the fruit is large, often eight inches in circumference, and of the finest quality. We predicted many years ago that this peach would be found better suited to a southern climate. This is one of the few instances where a variety succeeds better in other localities than that in which it originated. The *Tillotson* originated in Wayne county, N. Y. In the course of experience we shall, no doubt, meet with similar instances.

LONGWORTH'S PROLIFIC STRAWBERRY.—In a note recently received from Mr. LONGWORTH he says: "You will find the *Prolific* of more value than all the seedlings ever raised. We have many good pistillates, but never before a hermaphrodite with all blossoms perfect in both organs, and bearing a full crop of moderate sized fruit. The hermaphrodite fruit is uniformly large and of fine quality." He also asks the question, "If Mr. MEEHAN can, as he says, produce hermaphrodite flowers on a pistillate plant, in pot-culture in houses, what bearing can it have on the necessity of a knowledge of the sexual organs in ordinary American culture?" It is certainly true that however it may be in forcing the strawberry, a knowledge of the sexual organs of varieties is indispensable to out-door culture.

McAVOY'S SUPERIOR STRAWBERRY.—The *Pennsylvania Farm Journal* published some time ago a drawing of this variety quite different from ours—much longer. A correspondent of the *Journal* alludes to this, and asks which is right. In regard to this we can say, that our drawing was a correct representation of the fruit, judging from our own and all other specimens we have seen. Mr. McAVOY himself says our drawing is a fair one, but not of the largest size. We directed our artist to take from the best average specimens, which he did. In form the variety is well marked. In all the specimens we have seen there is a greater or less degree of flatness at the point, occasioned, apparently, by a want of filling out in the center.

McKAY'S ISABELLA GRAPES.—Accompanying the interesting communication of Mr. McKAY in the November number, was a box of his grapes which we can say, without hesitation, were the largest, best colored, and finest *Isabellas* we have ever seen. If Mr. McKAY were to write volumes, he could not furnish stronger arguments in favor of his mode of culture. It strikes us, however, that he applied larger quantities of manures than were really necessary. Half a dead carcass, a bushel of well-rotted stable manure, together with leather shavings and charcoal must be admitted to be a very liberal application to the bed of a single vine; but the results speak for themselves, and show at least one thing, that the Grape vine can bear high keeping.

LEPERE'S METHOD OF CULTIVATING AND PRUNING THE PEACH.—We commence in the present number the publication of a treatise by M. LEPERE, translated for the *London Hort. Society's Journal*, describing his system of managing the Peach tree. It will not, we are aware, be of general interest to cultivators in this country, where the peach is cultivated only, or principally, as an open ground standard tree. There are, however, a few exceptions. In some parts of the North the culture of peaches and nectarines in houses and on walls is attracting attention; and the explanation of the principles on which LEPERE's system of pruning and management depends, must be instructive to every one who cultivates the peach in any form, or under any circumstances: for the habits of growth and bearing are always the same.

THE NEW EARLY FLOWERING CHRYSANTHEMUM HENDERSONI.—This proves to be a real acquisition to our list of Pompones. It has this season bloomed with us about a month in advance of the others. The flowers are of medium size; compact and double, somewhat globular, of a clear yellow. Cuttings struck in July are now pretty dwarf plants in full bloom.

TOO CONTENTED AT HOME!—Can you understand and pity the state of a man too contented with his own home? I am that unhappy creature. I was so unfortunate as to be long in a very confining employment, but with plenty of time to read. Chance threw in my way *Loudon's Gardeners' Magazine*; the whole series I devoured, with all his other books—*Encyclopædia of Gardening*, *of Plants*, &c., &c. I got to work in a little garden, and soon filled it with walks, and plants, and fountains—birds, fishes, and a miniature plant case—and a plant cabinet. I ousted my wife from her dressing room, and filled it with bees—made more honey than all the family and its relatives could consume, and got tired of the subject. I conceived incredible expectations of a country garden—where I should have space for trees, a conservatory, and a green-house. My imagination ran riot in prospects of constant delights, in perpetually observing the expansion of flowers; never-failing occupation in planting and potting; vegetables and fruits the year round, of my own rearing; and so happy as not to require any other excitement.

I have realized my dream—I am too happy and contented at home! I never have the least inclination to go any where else! unless it be to see some new plant, or an improved mode of cultivating fruit. Society, in its old sense, has lost its charm; parties are a dreadful bore. From morning to night I find new and delightful occupation on my own premises, and dread the sight of a lady or gentleman wending their way through my gate, because of the danger of their occupying my precious time devoted to the companionship of my plants and trees.

Is not this the greatest unhappiness? My friends believe me to be melancholy, unsocial, even demented. Can you, in your "Answers to Correspondents," give me a remedy to cure this new and unheard-of distemper? Before I ask this, I should detail some of the symptoms:

LOUNDON laid the foundation of my complaint; a visit to the best rural residences in America and Europe increased it; DOWNING and the *Horticulturist* confirmed it. "Embellish your home" seemed a command that I must obey. I have, they say, succeeded; but my distress continues. I am perpetually striving after new effects; constantly planting out new borders, multiplying new shrubs, or planting new fruits. I have every new Pear set down by the learned pomologists as even "promising well;" have all vegetables, in and out of season. But I have heard of a gentleman in England who "could cut a Pine every day in the year:" must I aim at this too, or must my ambition be confined to the ability of only a daily bouquet. Camellias grown in the earth, and attaining the size of Peach trees, are possible things: must my ever-pushing and harassing hobby drive me to this too? I rise in the morning, full of the work to be done for the day: the day is too short to accomplish my plans. In short, I am *completely happy*, except when the borers take possession of my fruit trees, or the curculio of the fruit,* or I have so much that is excellent as to be compelled to oblige my friends and neighbors with a part.

Pray, Mr. Editor, do give your advice, and a remedy to the very first person that has complained to you that he is "too contented at home." ATTICUS.

ATTICUS has presented somewhat of a novel case. A man *too* happy is a *rara avis* indeed. The only remedy we can suggest is, that he immediately agree with himself to think he has attained the *summum bonum* this earth can give; and if he still determines to hug his idea that he is too happy, let him enlarge his grounds by fifty more acres, build ten more green-houses and conservatories, and be *entirely* happy. After he has done this we will advise further.

In some parts of Illinois, Iowa, and Wisconsin there have been frosts of unusual severity—destroying whole orchards of fruit that had not been gathered. Previous to this occurrence the fruit crop was unusually fine, and had given great encouragement to the extension of orchards.

* If the borers should write a book on "Insects Injurious to Fruit," they would assuredly class man as the most destructive.

HORACE GREELEY'S ADDRESS BEFORE THE INDIANA STATE AGRICULTURAL SOCIETY.—We have not in many a year read an Address of this kind with so much interest as we have this. The main points are :

ECONOMY OF MEANS ;

NECESSITY AND IMPORTANCE OF SCIENCE ;

DRAINING, DEEP PLOWING, AND IRRIGATION ;

WHAT THE SISTER ARTS TEACH AS TO AGRICULTURE.

These topics are all discussed in such a manner as to show that Mr. GREELEY is well informed respecting the condition of American agriculture, and his illustrations are so fresh and forcible that they can not fail to awaken an impulse toward improvement in every one who has heard or read them. If our space permitted we should gladly transfer the entire paper to our pages, but we must content ourselves with a few extracts, which are no less applicable to agriculture than to horticulture.

"*Deep Plowing, Draining, and Irrigation.*—The three main features of agricultural advancement among the Anglo-Saxon race are: 1. *Deep Plowing, or Subsoiling*; 2. *Draining*; 3. *Irrigation*. I am quite aware that draining should take precedence in the order of time, yet I believe, in point of fact, deep plowing has led to draining by demonstrating its necessity, and not draining to deep plowing. We suffer immensely from drouth in this country. Probably the aggregate annual loss from drouth alone throughout the Union decidedly exceeds, taking one year with another, the entire cost of our Federal Government. Yet we know that the roots of most plants will descend to moisture, no matter how dry the surface, if the earth beneath them is porous, mellow, and inviting. Hence we realize the immense importance of deep plowing; and after doubling our teams and sinking our deepest plows to the beam, we summon to our aid the subsoil implement, and go down a depth beyond that of any single furrow. But we soon find that the pulverization of the subsoil, thus attained, has no permanent effect; that the water that leaches down to it settles it into a compact, solid mass, which the roots can not perforate and all our subsoiling needs to be done over again. The remedy that readily suggests itself is the freeing of the subsoil from water by drains sunk below it—say three to six rods apart—and filled half way up with pebbles, with flat stones forming a sort of culvert, or, still better, laid with draining tile or hollow brick, placed end to end, and forming a continuous channel from the highest part of any slope or grade to the brook which drains it. And now the subsoil, supposing the drains well made and the drainageway sufficient, is readily freed from any water settling into it, and long retains the porous and permeable character communicated to it by deep plowing.

Of course, this does not exhaust the good effects of draining. The subsoil, thus loosened and freed from excessive moisture, becomes a source of food as well as drink to plants growing above it; for that it is capable of feeding plants, no one, who has observed the rank vegetation growing out of the earth thrown up by draining or digging, can doubt. Instead of being like a sponge in wet weather, and like a brick in dry, the subsoil retains sufficient moisture to cheer the plants, but too little to indurate itself. And the mean temperature of the soil, hitherto lowered by the constant evaporation of the water contained in the subsoil, is raised several degrees by the sun's rays, no longer counteracted by the evaporating process—at least, not to any such extent as before—so that the plants grow more luxuriantly, mature more rapidly, and so are earlier out of danger from frost. And beside this, the constant passage of currents of air through that portion of the drain not occupied by water—and each drain should have an opening at its head as well as at its mouth—is an additional source of fertility through the chemical combination it insures. It would be difficult to overstate the value, the importance, the profit of draining.

"Many are accustomed to say, '*This land needs no draining,*' meaning that it is not habitually too wet. But draining proves as useful, if not as imperatively necessary, on dry soil as on wet. On dry lands it is required that the subsoil, once broken up and pulverised, shall not, by the

settling of moisture therein during the wet season, be hardened and rendered impervious again; these lands need to be rendered porous and penetrable by roots to a greater depth *because* of their dryness; they need to be shielded from the pernicious effects of constant evaporation in cooling the soil, and thus retarding the growth of its plants. There is very much land not worth tilling; but there is none that will justify tillage which would not reward draining.

"Of irrigation we in this country know but very little by experience; but we are destined soon to know more, and to be profited by our knowledge. True, there are lands that may be readily drained and subsoiled that can not so readily be irrigated, owing to their elevation and a deficient supply of water. I apprehend, however, that these lands are not to be found in Indiana, nor in any other Prairie State, whose first peculiarities that strike a stranger are a superabundance of water in the rainy season, and a scarcity thereof in the dry. The time is at hand when you will here require extensive and powerful pumping apparatus, if only to raise water for your heavy stocks of cattle, and convey it to the pastures wherein they will be confined; and why not raise enough of the grateful fluid to refresh pastures and cattle alike?

"But even though this assured and ample resource were non-existent, I maintain that water enough falls on your fields every year to keep them fresh and luxuriant through the summer, if it were saved and not wasted. But most of it falls during the seasons when least is wanted, and is suffered to run off to the rivers and the ocean, carrying very much of the best juices of the soil along with it, when it should be retained in ponds and reservoirs to be pumped into barn-yards or drawn off to irrigate the field during the fervid heats of summer. The apparent difficulty of doing this would vanish, and the presumed expense be materially lessened on careful consideration.

"I know not that I have traversed any country with more lively interest than beautiful, picturesque Lombardy. The dark pall of Austrian despotism enveloping it did not suffice to dim its natural loveliness and luxuriance, so greatly improved by the labor and genius of man. It seems to have grown into this system of almost universal irrigation by imperceptible and unmarked degrees, and to be now producing double harvests annually as the result of some fortuitous impulse, rather than of foresight and deliberate calculation. The magnificent plain of Upper Italy, which has for so many centuries been the field of combat where Goth and Latin, Frank and Hun, Gaul and German, have struggled for the mastery of Europe, slopes almost imperceptibly from the Alps to the Po, and the impetuous torrents which tear the rocky sides of the snow-crowned precipices are arrested and chastened in the blue lakes which lie at the foot of the mountains, smiling serenely out upon the plain. Thence the waters proceed with a more gentle and measured cadence to the great river, and are drawn off and stayed from point to point to fill the irrigating canals, and ensure a rich reward to the husbandman's labors. Let any stream from heavy rains become a raging, foaming, milky torrent, and its waters have a value which the pure element could not command, and are drawn off on every side, until the canals and reservoirs are filled, and all danger of inundation precluded. Thus the waters are most valuable for irrigation just when they are most easily and abundantly obtainable for that purpose. The water which has irrigated one fertile garden or field, far from being exhausted, has been rendered more nourishing thereby, and may now be drawn off to fertilize the next field lying an inch or so lower, and thence to the next, and so on to the river, enriching and gladdening all it touches on its way. Irrigation is the life-blood of Lombardy; shall it be nothing, teach nothing to us?

If there be a country on earth which one would suppose irrigation unsuited to, Great Britain is that country. Her exceedingly moist, cool climate, coupled with her compact, clay subsoil (not universal, but very extensive), would seem to render a deficiency of moisture one of the very last evils to be apprehended or guarded against in her agriculture. And yet her best farmers are now embarking rapidly and extensively in irrigation, finding it practicable and immensely profitable. Not here as in Lombardy is the natural flow of the streams, in their descent from the hills to the rivers, relied on; but great pumps are employed, raising water by steam or other

power from rivers, brooks, and ponds, to a height whence it is carried by gravitation through metallic and gutta-percha pipes to every point where it is needed. Mr. MECHE, the ex-London merchant, who retired from trade with a competency to earn another by scientific farming, takes the lead in this application, and his estimates of the increased productiveness of lands by reason of irrigation and the profits thus secured would seem wild to any audience, unfamiliar with the subject. I may state, however, that he fixes the expense of conveying his manures in a liquid form from his yard to every portion of his estate as equivalent to one penny sterling, or two cents per cart load—that is to say, the fertilizing properties which were contained in a tun of muck or compost are now conveyed to the soil that requires them at the cost of one penny. That loading, teaming, unloading, and spreading in the old way must have cost far more than this, you can not doubt; and beside, the fertilizing liquid, being entirely free from seeds or weedy germs of any kind, and in a condition to be readily and totally absorbed by plants, must be worth twice as much as if applied in the old way. Now consider that this load of manure has been conveyed through and applied with many tuns of water, just when the soil is most thirsty, and the plants most needy, and you can readily judge that the tun of manure dissolved in water and applied through irrigating pipes at the cost of a penny, must be worth at least thrice as much as the same tun applied in the crude, solid state, at a cost not less than thrice that sum. But I must not dwell on details. You have the general idea, and can follow it out at your leisure into all its necessary results.

"The Proportion of Means to Ends.—And here let me retrace my steps to illustrate a point in Industrial Economy which I have already incidentally touched, but have not illustrated as its importance deserves, and as the prevailing misconceptions render necessary. I refer to *The Proportion of Means to Ends*, which the artisan must always bear in mind, but which the farmer seems too often to forget. No artificer presumes that the labor and material required for a fine table will suffice for a piano forte, nor that a steam engine can be constructed as cheaply as a churn. But the farmer, seeing trees and plants grow around him with weed-like facility and tenacity, often indolently imagines that *any* tree will grow so, and plants his rare and delicate fruit trees, if he plant such at all, as if they were Oaks and Locusts. But Nature is inexorable in her requirement that the labor and care essential to the production of a choice fruit or plant shall be proportionate to the value of the product. You may grow Pine on yellow sand, or Hickory on blue clay; but if you want choice pears or peaches you must devote much labor and expense in preparing and enriching the ground wherein your trees are to be set. Too many farmers, not heeding this law, or supposing that Nature may somehow be circumvented, obtain worthless fruit, or none at all, and so abandon the culture in disgust and despair.

There is not one Grape vine or fruit tree, except of the coarsest and commonest kinds, where there should be twenty, taking one State with another: and one consequence of this is an enormous and perilous consumption of flesh as food, to an extent unknown in other countries. We are nationally surfeited with pork and tainted with scrofula, not because we are so fond of pork, but because for an important portion of each year, the majority of our population can get little beside. 'The foolishness of preaching' will never suffice to correct this aberration; for men who work must eat, though their food be not the best; but give us an abundance of the choicest fruits and vegetables, with farmers who know how to grow them, and truly educated housewives, who delight in preparing and serving them, and we shall enjoy health, elasticity, and longevity to an extent now unknown. A flesh diet is the dearest, the least palatable, and the least wholesome, and all that is needed to wean men from it is the presentation of a better. To secure this, we need only farmers who will feel a just pride in having the finest orchards and gardens; who will surround, not merely their own dwellings, but those of their tenants and helpers also, with choice trees; and who will plant and keep planting until good fruit shall be so abundant that it can be no longer an object to steal it."

THE CATAWBA GRAPE.—To me one of the greatest pleasures of life has been the culture of trees and growth of fruit, and the success of others in so doing has always been extremely gratifying. Our seasons, at Rochester, N. Y., are not always favorable to the ripening of grapes, especially the *Catawba*; but the warm and dry weather of the summer and early fall months of 1853, has perfected all the varieties grown with us better than I have ever known before.

One of our townsmen, Mr. JACOB GRAVES—one of the *pioneer* citizens—has produced the *Catawba* this season of the very best quality, full as well ripened, and sweet, and luscious, as the same kind which I have seen grown at Cincinnati; and I have been to see how he trains and keeps his vines.

On a southern exposure, on a trellis entirely independent from his house, he has three vines, some four years planted, which have made good growth and borne plentifully. They have been annually pruned in February, and in the fall had finely-pounded *horn piths* put under cover of the earth around the roots, which has proved an excellent fertilizer. With a free circulation of air, and plenty of sun, the grapes have ripened beyond any thing I have ever seen, fully as sweet as any I ever tasted grown under glass.

Judicious pruning, and free circulation of air, all grapes require; and we only need to bestow that care to have the luxury of *sweet, well flavored* grapes, from October till April.

Mr. LONGWORTH, of Cincinnati, in acknowledging the receipt from me of a barrel of *Clinton* grapes, speaks very highly of them, as well ripened, and likely to prove a fine wine grape. They are most certainly a choice table variety, and worthy of cultivation. J. H. WATTS.

Mr. WATTS very kindly gave us an opportunity of tasting the *Catawbas* to which he refers, and we cordially agree with him as to their excellence. We may state in this connection that on our own premises the *Catawba* has ripened completely, and attained its highest perfection on a south wall of a house, while on an open wire trellis in the garden it had just begun to color when the frost came, and, of course, it did not become eatable.

TOMATO WINE.—I was presented by WELLINGTON ROSE, of the United Society, at Hancock with a specimen of wine manufactured from the juice of tomatoes, which so closely resembled old Madeira that it would have troubled an amateur to detect the difference. This wine was of the manufacture of 1851—so it was two years old. How far greater age would improve it we can not say; but as it is now we think it must be a valuable article for invalids, if we take into account its agreeable flavor and the undeniably great medical qualities of the fruit from whose juice it was manufactured.

The precise process of making this wine we have not fully learned, as the manufacturer claims he shall probably make improvements in the business. When this is done, from his known philanthropy, we have no doubt he will communicate to the public all the facts in the case, and become a greater benefactor to the sick and infirm, not only by furnishing the article ready made, but by telling others how to manufacture their own. W. BACON.—*Richmond, Mass.*

STRAWBERRY QUESTION.—Having learned through a friend that Mr. PRINCE, in the *Pennsylvania Farm Journal*, had challenged any person to produce a perfect fruit on a pistillate variety of strawberry, without staminate influence, I wish to state that I have at present a plant of *Black Prince* in a pot, with a truss of (to all appearance) perfect fruit. There has not been any staminate in flower here for some months; neither do I suppose there are any in this neighborhood at this particular season. There can be no mistake in this instance, for I observed the flowers closely on their first appearance, as also on their subsequent development, convinced that the opportunity was one to test the matter fairly, not being a season when strawberries generally flower, so that there could be no chance of pollen being introduced from any source. I expect, however, to find the fruit seedless—at least, the seeds imperfect. WILLIAM SAUNDERS.—*Baltimore.*

RIPENING OF FRUITS.—In compliance with a request published in the *Horticulturist* some time since, the period of the ripening of the following varieties of pears and early apples is given. This place is thirty-one miles west from, and in the latitude of, Philadelphia. Soil in the valley, clay loam; lime stone "crops out." The rocks and surface stones on the south hills, nearest which the trees grow, are gneiss or micaceous slate, and occasional boulders of trap.

The manner pursued in making this list, was to note the period when the first perfect specimen ripened on the tree, and the last in the house. In some instances the *quantity* was limited, and the period of duration consequently shortened. It is well known to most of your readers, that by artificial means that period may be very much prolonged.

Apples.—Early Joe ripened from July 25th to August 10th. Brenneman, August 1st. Porter August 5th to September 5th.

Pears.—Madeleine ripened from July 10th to 22d. Meynard, July 22d to 31st. Jargonelle, July 27th to 30th. Osband's Summer, July 30th. Bloodgood, July 29th to August 5th. Belle of Brussels, August 1st to 22d. Deux fois l'an, August 2d to 13th. Sanspau, August 4th to 14th. Dearborn's Seedling, August 4th to 15th. Tyson, August 4th to 30th. Summer Franc-real, August 5th to 15th. Schenck's, August 5th to 25th. Julienne, August 8th to 30th. Summer Rose, August 6th to 30th. Steinmetz Catharine, August 10th to 30th. Bartlett, August 10th to September 20th. Washington, August 15th to September 5th. St. Ghislain, August 20th to September 10th. Flemish Beauty, August 22d to September 22d. Fondante de Malines, Stevens' Genesee, Capiaumont, Andrews, Fondante d'Automne, Napoleon, Lodge and Diller, all ripened August 25th, and continued until September 5th and 7th, except Capiaumont, which was "very good" until September 30th. Doyenné Boussouck, August 29th to September 5th. Pennsylvania, August 30th to September 10th. Hawthorn, August 25th to September 18th. Hews, August 25th to September 7th. Seckel, September 1st to October 15th.

You are at liberty to use these "rough notes" as suits your convenience, and can have a continuance of "more material, if desirable."

It would probably meet your views, if in future none should be given unless they are deemed worthy of culture in this location, or rank at least "very good." Such are not all of the above. J. K. E.—*Dowington, Pa.*

MR. LONGWORTH ON THE STRAWBERRY QUESTION ONCE MORE.—A PROPOSITION.—I regret to learn that your brother of the *Prairie Farmer* has not faith enough to accept my proposition, in regard to the sexual character of the Strawberry. I will test it further. The *Hudson, Necked Pina*, and *Hovey's*, he says, with him were separate, and each pure; each bore staminate and pistillate blossoms. If he will send plants of these kinds to Messrs. BUIST & BRINCKLE, and either of them, in adjoining beds, will bear perfect fruit, with no other kind within one hundred yards of them, I will present him with a silver pitcher, of the value of \$100. If they will, as he states they did with him, bear staminate blossoms, I will present him with a like pitcher, of the value of \$100. If he will get these gentlemen to certify their belief in the changes accomplished by him, or those by Mr. MEEHAN, and which he says "*renders our Strawberry theory worthless*," I will send him a like pitcher. I fear Mr. MEEHAN's mind is wandering on the subject. If he could, by artificial heat, produce a change in the sexual character of some blossoms, the children of our market gardeners would say it has no bearing whatever on out-door culture. W. LONGWORTH.—*Cincinnati, O.*

P. S.—I am not personally acquainted with the horticultural editor, Dr. KENNICOTT. I request his opinion, in your next number. If he believes in the sexual changes in your three kinds of plants, I will believe in Rochester knockings. If he believes in the sexual character undergoing no change, he owes it to his station as editor, and the Strawberry growing community, to correct the error, and will do it.

SHENK PEAR.—No one could give a truer history of this pear than that friend of horticultural improvement, J. B. GARRE; but for the sake of pomological nomenclature, let it henceforth be called *Shenk*, or *Schenck's*, which is outlandish enough, *sans culotte*. A familiarity with this variety for years in its native locality, led me to estimate it highly; but having fruited it here for three years, my opinion is changed. It ripens only a few days earlier than the *Bartlett*, and is much inferior. It cracks badly, and among dozens not a perfect specimen is obtained. In those regions where the *White Doyenné* fails, it will be well to adopt it with caution. J. K. FAHLEMAN.—*Downington, Pa.*

THE VICTORIA REGIA.—MR. JOHN SAYERS, of Cincinnati, writes us: "I have been very successful with the *Victoria regia*, and have it now finely in bloom; have had leaves six feet three inches in diameter, which "astonished the natives" out here. It flowered for the first time on the evening of September 23d, at the time of our Horticultural Exhibition. I exhibited a leaf and flower, which attracted the attention of a great many to the Exhibition."

BOOKS AND PAMPHLETS RECEIVED.—FROM WM. BREWSTER, Esq., Montreal, *River's Orchard House; or, The Cultivation of Fruit Trees in Pots Under Glass*. Second edition: 1853.

—*The Provincial Price List of the Agricultural and Industrial Exhibitions of Canada for 1853.*

Answers to Correspondents.

I SEND you by express a small box containing a stem of my *Chautauque Perpetual* strawberry, found a year since in the field. It has been in bearing since June just as you see it now—blossoms, green, and ripe fruit. What is it? and is it like any of the other Perpetuals? The sets of this year are also in blossom and fruit. L. RISLEY.—*Fredonia, N. Y.*

The fruit came quite fresh, and has all the appearance of an *Alpine* strawberry.

LIME AND SULPHUR VERSUS THE CURCULIO.—In the September number of the *Horticulturist*, page 428, I read a communication from THOS. W. LUDLOW, Jr., Yonkers, Westchester county, N. Y., in which he says: "This is the third season that I have been successful in destroying the eggs of the curculio, after they were deposited on the fruit; and I do therefore feel assured that the compound used by me is an effective remedy. I strongly recommend its general use, and if it be thoroughly applied," &c. Now, as I wish to become acquainted with the manner of making the application of this remedy (lime and sulphur), by republishing the original article you will confer a great favor on at least one new subscriber. E. P. GOODSSELL.—*Hartford, Conn.*

The following is the article referred to by Mr. GOODSSELL:

RAVAGES OF THE CURCULIO PREVENTED.—The accompanying box will show evidence for itself, that I have, for the second year, found means of arresting the fearful progress of the curculio, which is by syringing the trees, after the fall of the blossom, with a mixture of whitewash and flour of sulphur, in the proportion of eighteen double handfuls of sulphur to a barrel of tolerably thick whitewash, made of unslaked lime. The sediment of this mixture will answer for a second and third barrel, merely filled with water, and well stirred.

I applied the above three times a week for four weeks, and have met with great success, having been obliged to prop the limbs to sustain the weight of the fruit. The trees are ten years old, and have blossomed every spring, but have never until last year ripened any fruit.

The specimens I send you are *Bolmar's Washington*, and you will observe upon some of them the marks of that little infamous Turk, which are nicely healed over, leaving the crescent to light up those who may have doubts that they are the production of a curculio district. Syringe well, and although the fruit may be stung, it will come to perfection.

I am glad to find that Mr. STOKES has also been successful in raising this most delicious fruit; and his idea of coloring the whitewash is a good one, as it does away with the glaring effect given by the lime.

I have doubts of the practicability of using a rose upon the tin garden pump, as it will soon stop up with particles of lime, and become useless. I prefer the lip which generally comes with these pumps. This may be bent in such a manner as to flatten the stream as it passes out the spout, and thus disperse it over the tree. I did not notice that any of the fruit withered or turned yellow, as spoken of by Mr. STOKES—of course there were some, as is the case in the best plum districts, that decayed and fell from the trees, making room for those that are left to have a chance to swell.

I AM a subscriber to your periodical. I reside in New Jersey, and do business in New York. If the inclosed paper is correct, why can not we have strawberries in the same manner in our locality as they have them in Columbus? Please notice this communication in the *Horticulturist*, and oblige a true friend seeking information. A. F. B.

"A correspondent of the *Cincinnati Gazette* thus describes a visit to the estate of Mr. PRABODY, an eminent horticulturist near Columbus, Georgia:

'Mr PRABODY has a very healthy location on a hill in the pine wood—over six hundred acres; and when they went on it, thirteen years ago, not a tree had been cut. He cleared a space for his house, and then moved in the next spring. He has proved the most successful cultivator of several kinds of fruit, berries, and melons in this country. I saw one thousand hills of water-melons, on which will be ripe fruit by the 10th or 15th of June; he says he has frequently picked them weighing fifty pounds. His great peculiarity with strawberries is the quantity of fruit, its size, and flavor, and the *constant bearing* of the vines; always has plenty of fine berries for six months—frequently eight—and last season he had them every month in the year. Recollect this is in the open air—in his open fields. I saw eight acres of strawberries; the vines are very small, and covered (the ground literally looks red) with most delicious *Hovey* berries. These vines have been in just as full bearing since the 10th of March, and he says will continue until the middle of September, and as much longer as frost keeps away, if he chooses to attend to them. Mr. P. sends to this market from 150 to 200 quarts per day, and says he could pick double the quantity if the market was larger.'

There are but two ways to have strawberries in *constant bearing*: one is, and the most practicable, to plant the *Monthly Alpine*, furnish them liberally with water in dry weather, with an occasional application of liquid manure, and you can have fruit from June to October. Another way is, to have a stock of plants retarded by removing the blossom at the usual season, and bring them forward when the first crop is passed. This requires the exercise of much skill and a considerable amount of labor. We think there is a mistake in the above newspaper extract in regard to *Hovey's Seedling* bearing from the 10th of March until September.

Horticultural Societies.

THE CINCINNATI HORTICULTURAL SOCIETY met Saturday, Sept. 10th, 1853, Dr. MOSHER presiding. Minutes of the last meeting read and approved.

M. T. Winter presented two reports of the Philadelphia Horticultural Society; one of them on Insects was referred to the committee on Insects; the other on Fruits to the Fruit committee.

The following gentlemen were appointed a special committee, as the fruit committee was absent: Messrs. Buchanan, Kelly, Hatch, Hill, Graham, McAvoy, Duhme, Anthony, and Dr. Warder.

The President appointed the following gentlemen as delegates to the North Western Pomological Association, to be held at Chicago on the 4th and 7th, inclusive, of October: R. Buchanan, Freeman G. Cary, Dr. W. N. Brisbane, Dr. J. A. Warder, Wm. Heaver, A. H. Ernst.

Mr. Hatch, of the Wine committee, reported a communication from Mr. Longworth, bearing date August 27, 1853, in regard to the weight of must of the Clinton grape, and propounding the inquiry "whether the weight of the must in all grapes is a certain indication of the saccharine quality of the grapes, and the strength of the wine it will produce."

As this question will require a careful examination, and a perfect test by experiments, in order to arrive at a satisfactory solution of the subject, the committee respectfully request the Society to refer the matter to a select committee of grape growers, with a request that such committee would, in the course of the present season, make all the experiments necessary to the ascertainment of the facts involved in the subject.

The committee think the subject an important one, and hope that the reference will be made, and that such committee will report the result of their inquiries and tests to the Society at as early a period as may be practicable.

The following gentlemen were appointed said committee: Dr. Rhelus, Dr. Warder, and R. Buchanan.

The following should have been received with the very fine pears exhibited last Saturday without a name; it is from Thorp, Smith, Hanchett, & Co., whose contributions are most cordially welcome:

"SYRACUSE, August 27, 1853.

"We yesterday directed to the Cincinnati Horticultural Society a small box with two specimens of the Hosenschenck pear. They were pulled green and packed away in buckwheat chaff, and have imbibed a musty taste from the chaff. The fruit is large; flesh exceedingly juicy, melting, and refreshing, as good as any Virgalieu we have tasted for five years, and equaling the Onondaga in every respect. When fully matured, they are of a rich, golden yellow, with a beautiful red cheek on the sunny side. They are certainly the best summer pear in America. Ripens from the tenth to the last of August. We can give you a full history if desired. The trees have been so full this season that the fruit is below size."

The Secretary presented a schedule of premiums offered at the Annual Exhibition of the Kentucky Horticultural Society, to be held in Louisville on the 28th and 29th of September, 1853. On motion, all that can go may be appointed by the President delegates to this and other exhibitions.

The following invitations were read, and, on motion, adopted, and the thanks of the Society ordered to be presented by the Corresponding Secretary:

"NEW HAVEN, August 20, 1853.

"To the Cincinnati Horticultural Society—Gentlemen:—At a stated meeting, the Board of Directors instructed the Secretary to invite your Society to visit, by delegation, the Annual Fair of the New Haven Horticultural Society, to be held at the State House, in New Haven, on the 28th and 29th of September next.

Very respectfully,

GEO. GABRIEL, Secretary."

John P. Foote, Robert W. Burnet, and George Graham, were appointed delegates.

"The Butler County Agricultural Society, through John M. Millikan, extend a cordial invitation to the Cincinnati Horticultural Society to attend their third Annual Fair, at Hamilton, Ohio, on the 15th and 17th proximo; and appoint John A. Warder and George Graham on the fruit com-

mittee; Wm. Heaver, with S. S. Jackson on the flower committee; and Peter Melendy on poultry. Gov. Corwin is to deliver the address."

*"To the Cincinnati Horticultural Society:—*Our brother Foote, the great advocate for the superior quality of the White Scuppernong grape of North Carolina, I am pleased to say, has now an opportunity to prove its superiority as a table grape. The question of its wine qualities I yield, by admitting that it would be a greater miracle than the Rochester knockings if it is not superior as a wine grape to its table qualities. You last season saw the famous Connecticut Charter Oak grape, for which some of our brothers paid from three to five dollars per root. You will readily admit that if thickness of skin and hardness of pulp are desirable qualities, the Scuppernong is superior to the Charter Oak Fox grape. The leaves came with the grapes, and to prove them genuine I send you fresh leaves of the Scuppernong in my garden, sent me from Carolina. I send you with them one of my Fox grapes (Minor's Seedling), that the great superiority of the Scuppernong may be stated. I send you a bunch of the Marion grape, Lee grape, and blue-black Chillicothe Seedling, that you may state their relative qualities as table grapes. Also the Union Village grape, to test its size, thinness of skin, softness of pulp, and its abundance of juice, in comparison with Mr. Resor's extra sized Black Hamburgs, raised under glass. I also send a bunch of the Arabia Seedling grape, sent me by express by Mr. James M. Hannah, of Salem, N. J. I send a bunch of the Isabella grape, to test the quality of the Marion, the Lee, and the blue-black Chillicothe Seedling with it, as they all bear a resemblance to it. They are all, in my opinion, superior. If the Marion retains its qualities of the last two years as a table grape, I shall deem it worth a million of dollars, if as hardy east as the Isabella. It is a much better bearer than the latter, ripens uniformly, the bunch and berry larger, and I deem it of far superior quality for the table. I do not send the Express grape, as it is not ripe. The others would have improved on the vine for two weeks."

Respectfully,

N. LONGWORTH.

"September 10, 1853.

On motion, adjourned.

J. C. JEFFERIES, *Secretary.*

FRUIT EXHIBITED.—*Apples*—By R. Buchanan—Baldwin, Alexander, Gravenstein, Summer Queen, Red Fenouillet, Harrison, Newtown, Spitzenburgh, Red Bellefleur, Ashland, Scholl's Red Winter, Sweet Pearmain, Minister, Satch, Blenheim Pippin, Prior's Red, White Bellefleur, Yellow do., Belmont Delight, Maiden's Blush, Fall Pippin, American Golden Pippin, Red-Cheeked do., Green do., Dutch Codlin, Golden Spice, Fallawater, London Sweet, Rhode Island Greening, Holland Pippin, 14 varieties, names unknown; in all, 44 varieties.

Pears—Bartlett, Seckel, White Doyenné, Duchesse d'Angoulême, Stone's Seedling, one, name unknown.

Plums—Flushing Gage, Blue Gage, Canada Red, Diamond, Bleeker's Gage, Blue Imperatrice, Yellow, and two, names unknown.

Pears—By M. S. Wade—White Doyenné, French Butter, Napoleon, Swan's Orange, and Autumn Superb.

By A. M. Ernst—Seckel pears.

By M. W. Carey—Two very large and beautiful apples, called the King Pippin.

By J. C. Jefferies—Bartlett pears.

By P. S. Bush—Yellow Egg plums.

Grapes—By N. Longworth—Isabella, some of the berries, as usual, unripe; Scuppernong, pronounced Muscadine, of the Southern States, a very inferior grape in every quality except size of berry; Union Village, or Shaker grape—bunch medium size, berries larger than the best Black Hamburg grapes from the hot-house of Wm. Resor, black, round, skin and pulp as delicate as Black Hamburg, flavor agreeable, rather acid and musky, but inferior to Black Hamburg; Marion—resembling Isabella very much, but with a larger and better ripened bunch, and a sweeter and more musky flavor; Lincoln—bunch small and closely set, berry small and black, with thin skin and pulp, flavor inferior; Blue-black Chillicothe and Lee—both pronounced Isabella; Arabia—inferior in size and every quality to Isabella.

From Wm. Resor—Splendid samples of Black Hamburg and Victoria grapes, from under glass.

From George Graham—Very good Black Hamburg grapes, grown and ripened in the open air.

From P. Outcault—*Pears*—Napoleon, White Doyenné, Stevens' Genesee, Fall Butter, Bartlett, Bezi de la Motte, Prince de Printemps.

From T. V. Penticolas—*Pears*—Bourse, Amalia, Beurré Bose, Cumberland, 'Seckel, Golden Beurré of Bilboa, Louis Philippe, Fall Butter, Beurré de Capiaumont, Bon Chrétien, Fondante Beurré. *Apples*—Maiden's Blush, Blue Pearmain.

FLOWERS.—By T. S. Jackson—A large collection of seedling Verbenas, among which were several very distinctly marked, and equal to any in cultivation here; also, a seedling Dahlia, of promising character.

HORTICULTURAL DEPARTMENT OF THE PROVINCIAL FAIR, UPPER CANADA.—The floral hall, which is at all times the principal attraction, was situated on the summit of the elevation. It was one hundred and twenty feet long by eighty feet broad, forming a center hall about twenty-four feet wide the whole length, and two side halls also the whole length of the building. The eastern side hall was devoted chiefly to the flowers and vegetables.

There was a good display of annuals and Verbenas. The display of Dahlias was not so great. There were some very tastefully done up table boquets. There was a very pretty floral design by Mr. KERR's gardener, filled up in the different plots with *Asters*, *Marigolds*, *Verbenas*, &c. There was a fine box of annuals from Messrs. THOMPSON & MURRAY, of the City Gardens, Hamilton. Judge CAMPBELL, of Niagara, had some very good Cockscombs, seemingly the same that figured at the Horticultural Show in Toronto lately, and received so much merited praise. J. F. MOORE, of Hamilton, had a very fine display of Balsams. ENEAS KENNEDY had a very good collection of plants, from his own private garden. Mr. FLEMING, of Toronto, had a pretty fair collection of green-house plants. THOMAS & MURRAY had a very pretty flowering *Jasmine*, very useful and suitable for a hall window; it flowers in the early part of the season, and gives out a powerful and most delightfully fragrant odor. They had a fine specimen of *Veronica*, and a very pretty *Gesneria zebrina*, a plant of beautiful foliage. The *Torenia Asiatica*, from the same gardens, was a very fine specimen, with a beautiful soft blue *Memulone* flower. It grows easily, and flowers freely; but requires a good deal of heat to bring it to perfection. There was a very graceful *Japan Pine* from the same garden. This plant is well adapted for a conservatory. The *Lantana Ewingii*, a flower something like a *Verbena*, but more variegated. The flower first becomes orange, it then fades to a fine soft pink, and from that comes nearly to a white, the flowers appearing in all their different stages in one plant at the same time. It flowers from the beginning of June all the way to winter, and is well adapted for bedding out. It has been only recently introduced. There was one plant, a native of California, termed the *Zauchneria Californica*, with a beautiful scarlet flower, resembling a *Fuchsia* somewhat. This plant is also well adapted for bedding out. J. F. MOORE exhibited a very healthy *India Rubber* plant, and one *Orange tree*, with one specimen of the fruit upon it. There were two fine specimens of *Aloe*, and a very fine specimen of the *Abutilon striatum*, with a beautiful striped well-shaped flower; a considerable variety of *Cacti*, and a rather curious plant—the *Æchynanthus zebrina*—from the same garden.

On the opposite side of this hall there was a great display of cabbages, chiefly from Toronto gardens. There were also squashes, in great variety; celery, large beets, and also some remarkably fine table beets. Mr. LESSLIE showed a good collection of pears and quinces, of very fine quality. In the western hall there was a most magnificent display of white and red onions, the finest by far that has yet been exhibited at any of our fairs. There were some tomatoes of a very large size, but not very tempting; there were some very fine small ones. There was a display of white table turnips, very fine. The capsicums were a very good display. There were some good cauliflower, two heads especially very fine. The chicory looked well—it was chiefly from PEAR's garden, Yonge street. The carrots were a very good display. There were three baskets of varieties of vegetables. The Baron de Longueuil displayed some very fine egg plants, of a large

size. The watermelons were rather an ordinary display. The Normal School, Toronto, exhibited specimens of the production of the experimental garden: there were cabbages, oats, barley, potatoes, corn, carrots, beets, mangel wurzel, turnips, &c., &c., with a full report of the quantity raised, and all the particulars connected with the various specimens.

The peaches were a very good display. There were some very excellent hot-house grapes, from W. H. BOULTON's garden. ENOCH TURNER and W. B. JARVIS, of Toronto, and W. P. McLAREN, of Hamilton, had also some very fine specimens. There was a very prolific specimen of grapes, we think from Mr. LEWIS, of Saltfleet; there were upwards of forty bunches on one vine about three feet long. Mr. HUMPHREYS, of Toronto, exhibited a basket of very excellent Sweet Water grapes. This was decidedly the best specimen of that kind of grapes in the exhibition. There were fifty-six different entries of "twelve winter apples." The winter table apples made a very good display. The Ribston Pippins were very fine. There were some excellent baking apples, from LESSLIE's Garden. There were seven entries of twenty varieties of apples, some of them very fine, from LESSLIE, TURNER, and BRUCKLY, of Hamilton, and others.

Dr. CRAIGIE's son displayed some very fine specimens of dried plants, very well prepared. There were only a few of them displayed, the greater part of them being left in the portfolio.

MOBILE (ALA.) AGRICULTURAL AND HORTICULTURAL SOCIETY.—We have just received a circular from the Secretary of this Society, containing an account of the organization of the Society on the 20th of February last, and other matters, showing the Society to be in a prosperous condition. We copy from the circular:

"At the first meeting after the organization, it was voted that \$500 be set apart for premiums, to be awarded at the first Fair, which was arranged to take place on the 24th of May. Unfortunately, the period was unpropitious, being too late for most of our choice flowers, and too early for fruits. As it was, however, we made a very respectable exhibition, the floral display being very gratifying, and the collection of vegetables superb. There was competition for all the prizes arranged by the committee, and all classes of our community manifested much interest on the result of the Fair."

President—CHARLES C. LANGDON.

Vice Presidents—CHESTER ROOT, GEO. N. STEWART, JOHN C. HODGES.

Corresponding Secretary—W. W. MCGUIRE.

Recording Secretary—SAMUEL PENNY.

Treasurer—A. L. POPE.

CALIFORNIA GRAND AGRICULTURAL AND HORTICULTURAL FAIR.—We have received from Messrs. WARREN & SON, of San Francisco, a circular containing a premium list amounting to about *two thousand dollars*! The Fair was to be held at San Francisco, and continue one month. We notice a premium of twenty-five dollars offered for the best one hundred acres of potatoes. This looks like doing things on a large scale. We copy the premiums offered on fruit:

"For the finest display of grapes, a silver cup, \$25. For the finest display of melons, a silver cup, \$25. For the finest basket assorted fruits from one cultivator, a silver cup, \$25. For the finest specimens of native grapes, a medal, \$10. For the finest specimens of figs, a medal, \$10. For the finest specimens of pears, a medal, \$10. For the finest specimens of apples, a medal, \$10. For the finest specimens of peaches, a medal, \$10. For the finest specimens of watermelons, \$5. For the finest specimens of muskmelons, \$5. For the finest specimens of egg plant, \$5. Every dish of fruit of rare or new kinds, esteemed by the committee worthy, shall receive a medal, valued at \$5."



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